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COINAGE AND CURRENCY OF THE BELGIC TRIBES DURING THE GALLIC WAR

SIMONE SCHEERS

THE dating of the gold coinage of the continental *Belgae* is important for the monetary history of Britain, for some issues were current in Britain as well as on the Continent, while others never crossed the Channel.



FIG. 1. Weights of 'Belgic' staters.

1. *Ambiani*, types both sides. 2. *Ambiani*, uniface. 3. *Vellocasses* (?). 4. *Suessiones*, anepigraphic.
5. *Nervii*. 6. *Treviri*.

This paper describes a phase of Belgic coinage of special importance derived from a single prototype, the staters of the *Ambiani* with types on both sides (Pl. I, 1-2). This series was formerly but wrongly attributed to the *Atrebat*es, and must have been struck immediately before the Gallic War, waged between Caesar and the *Belgae* from 58 to 50 B.C.

The cohesion and importance of this group of coins is evident, for though there are many varieties, all are characterized by a clear relationship of type, weight-standard (Fig. 1), and technique of minting. The series consists for the most part of staters only. Coins can be attributed to the *Ambiani*¹ (Pl. I, 3-4), the *Suessiones*² (Pl. I, 5-6), the

¹ Uniface staters formerly attributed to the *Morini*. The coinage of the *Ambiani* comprises the following successive issues: broad-flan staters (Gallo-Belgic A), staters with types on both sides (Gallo-Belgic C) and uniface staters (Gallo-Belgic E and Xc. 1). The latter were contemporary with the Gallic War, and were the

last gold coins to be issued by the *Ambiani*.

² H. de la Tour, *Atlas de monnaies gauloises*, Paris 1892 (cited as LT), pl. XXXII, 8018-20 and XXXI, 7631-2. Cf. S. Scheers, 'L'histoire monétaire des Suessiones avant l'arrivée de César', *Ancient Society*, i (1970), pp. 135-61, Pl. V.

*Meldi*¹ (Pl. I, 7–8), the *Nervii*² (Pl. I, 9–10), the (?) *Veliocasses*³ (Pl. I, 11–12), and the *Treviri*⁴ (Pl. I, 13–18). The presence of certain of these staters, particularly the uniface staters of the *Ambiani*, in a good number of hoards, demonstrates that they must be linked to events in the Gallic War.

There is no doubt that these 'Ambianic' or 'Belgic' staters are contemporary with the war. The weight, the extremely low fineness of the gold (Table 1), and the large hoards are all evidence of this. Noteworthy also is the appearance of inscriptions, in particular the presence of the same legends on silver and bronze issues.

TABLE I
Fineness of 'Belgic' staters

	% gold	s.g.	fineness
Ambiani, types both sides	69	14.6–15.3	3.10–4.20 g.
uniface	45–55	12.8–14.8	3 g. and less
Suessiones		12.9–13.7	
Nervii			1.90–2.20 g.
Treviri	50		

Careful reading of Caesar's Commentaries enables us to relate certain details of the coinage to the historical account, and thus obtain a more precise chronology for some of these series.

To the *Meldi*, for example, can be attributed the gold staters inscribed ROVECA. Caesar mentions this people for the first time in 54 B.C.⁵ Before the war, they had been a part of the confederacy of the *Suessiones*, but after its collapse in 57 B.C., the *Meldi* gained their independence.⁶ There is no doubt that the striking of coinage, especially in gold, implies political independence, at least during the war. The gold staters of this people cannot therefore be earlier than 57 B.C. The strong influence upon the ROVECA staters of the gold coinage of the *Suessiones* can be accounted for by the proximity and the long period of political association of the issuers, an influence extending also to certain struck bronzes.

The gold coinage of the *Treviri* is very interesting and shows much variety. It consists of six classes, two uninscribed and four bearing legends, VOCARANT, LVCOTIOS, POTTINA, and APΔA. They fall into two distinct groups. The first comprises the anepigraphic class with the 'oval eye' and those inscribed VOCARANT and LVCOTIOS (Pl. I, 13–15). Type and style are similar, and the weight exceeds 6.00 g. (Fig. 3). Coins of this group are found in considerable numbers throughout the whole of northern Gaul, though rarely in the actual territory of the *Treviri* (Fig. 2). The second group contains the other anepigraphic class, that with 'concentric circles', and the inscribed coins of POTTINA and APΔA (Pl. I, 16–18). These classes never exceed 6.00 g. and the last two are struck to the very low standards of 5.40 to 5.49 g. and 5.30 to 5.39 g. respectively (Fig. 3). Their distribution is confined to Treviran territory itself (Fig. 4).

¹ LT XXXII, 7941–5.

² LT XXXV, 8746–66.

³ LT XXIX, 7234–48. There are also quarter staters.

⁴ LT XXXV–XXXVI, 8799–825.

⁵ Caesar, *De Bello Gallico*, v. 5. 2.

⁶ J.-B. Colbert de Beaulieu and J.-M. Desbordes,

"Criciru" et "Roveca", les Belges sur la Marne', *Revue Belge de Numismatique*, 110 (1964), pp. 98–101; J.-M. Desbordes, 'César et les Suessiones', *Mélanges d'archéologie et d'histoire offerts à André Piganiol*, Paris, 1966, pp. 972–3.

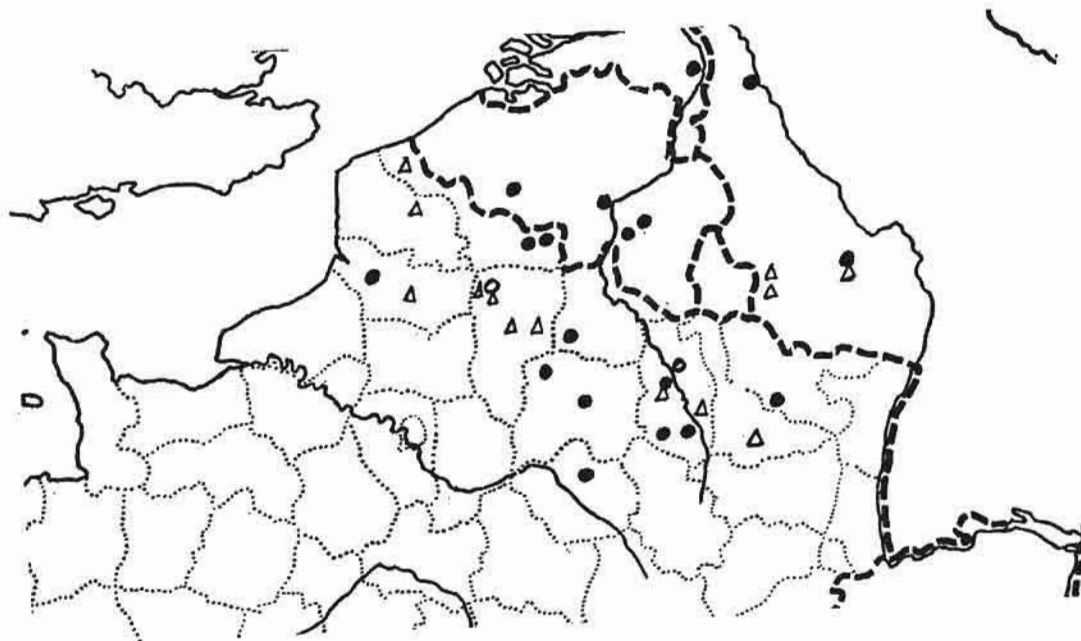


FIG. 2. Findspots of Treviran staters (First Group).

● Anepigraphic staters with the 'oval eye'. ○ Staters inscribed VOCARANT. △ Staters inscribed LVCOTIOS.

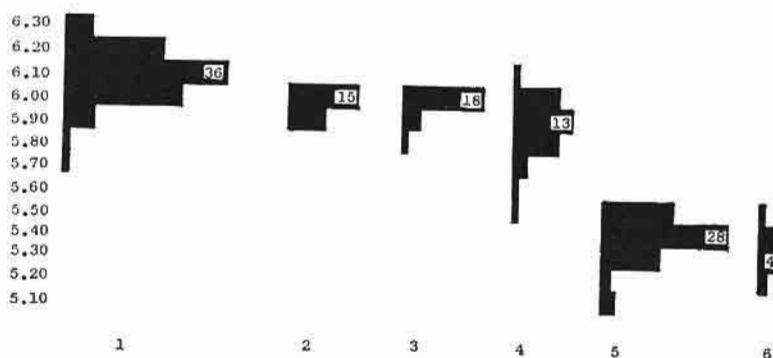


FIG. 3. Weights of Treviran staters.

1. Anepigraphic staters with the 'oval eye'.
2. Staters inscribed VOCARANT.
3. Staters inscribed LVCOTIOS.
4. Anepigraphic staters with 'concentric circles'.
5. Staters inscribed POTTINA.
6. Staters inscribed APΔA.

The coinage of the *Treviri* well reflects the political and military intrigues of that people. Before 54 B.C. they pursued a devious course, taking care to remain on good terms with the three powers between which they found themselves: the Germans from beyond the Rhine, the *Belgae*, and Caesar. Sometimes they helped one, sometimes another, and thus succeeded in avoiding war. In 54 the anti-Roman party, led on by

Indutiomarus, took over the leadership of the tribe, and Roman intervention became inevitable. We can date the first group of coins with certainty before 54 B.C., in view, as we shall see, of its wide distribution outside Treviran territory. The second group falls therefore in and after 54; its restricted distribution corresponds admirably with the new policy pursued from this date.

This conclusion is supported by the evidence of rare staters attributed with near certainty to the *Eburones*¹ (Pl. I, 19). On the obverse is a triquetra, related to that on the 'Regenbogenschüsselchen' struck by the Germanic peoples on the Rhine; the

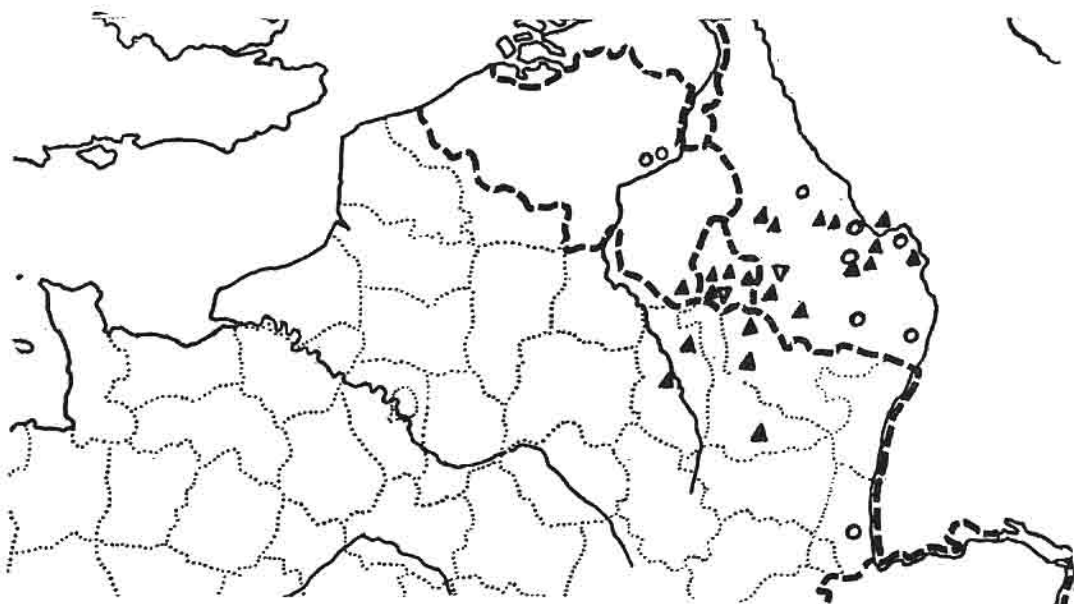


FIG. 4. Findspots of Treviran staters (Second Group).

▲ Anepigraphic staters with 'concentric circles'. ○ Staters inscribed POTTINA. ▽ Staters inscribed APΔA.

horse of the reverse is copied from that on Treviran staters with the 'concentric circles' (Pl. I, 16). Little is known of the *Eburones*, other than Caesar's statement that they were of Germanic origin. They were incited to revolt by Indutiomarus, chief of the *Treviri*, and in 54 Ambiorix attacked the camp of Sabinus and Cotta, annihilating the garrison. If the *Eburones* struck coin, it can only have been at this time, when Ambiorix needed to finance his campaign. The close links between the *Treviri* and the *Eburones* in 54 explain the presence of the type of the one on the reverse of the stater of the other.

It follows that the Treviran staters with the 'concentric circles' must be assigned to Chief Indutiomarus. This explains at the same time why this is the first issue not to be found outside Treviran territory, and the slight reduction in weight. It might equally explain the absence of a legend on these coins, since this practice was of Roman origin. In order to strike these coins, Indutiomarus will have had to withdraw all earlier coins; this, then, is the reason for their almost total absence within the land of the *Treviri*, in

¹ LT XXXVI, 8859.

contrast to later issues. As for the coins inscribed POTTINA and APΔA, they are as we have seen of a much-reduced weight standard. They come after the pause in hostilities during the winter of 54–53, some time after Indutiomarus himself had fallen in battle in 54.

We are not in a position to offer so detailed a picture of other Belgic currencies, for which information on the coins is less clear and the role of the issuing peoples less precisely known.

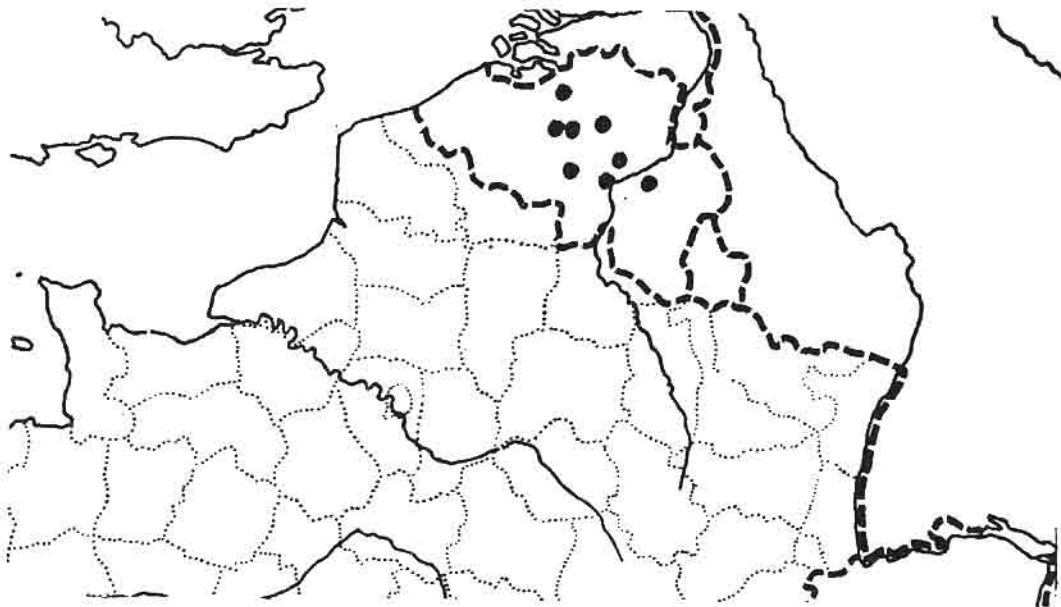


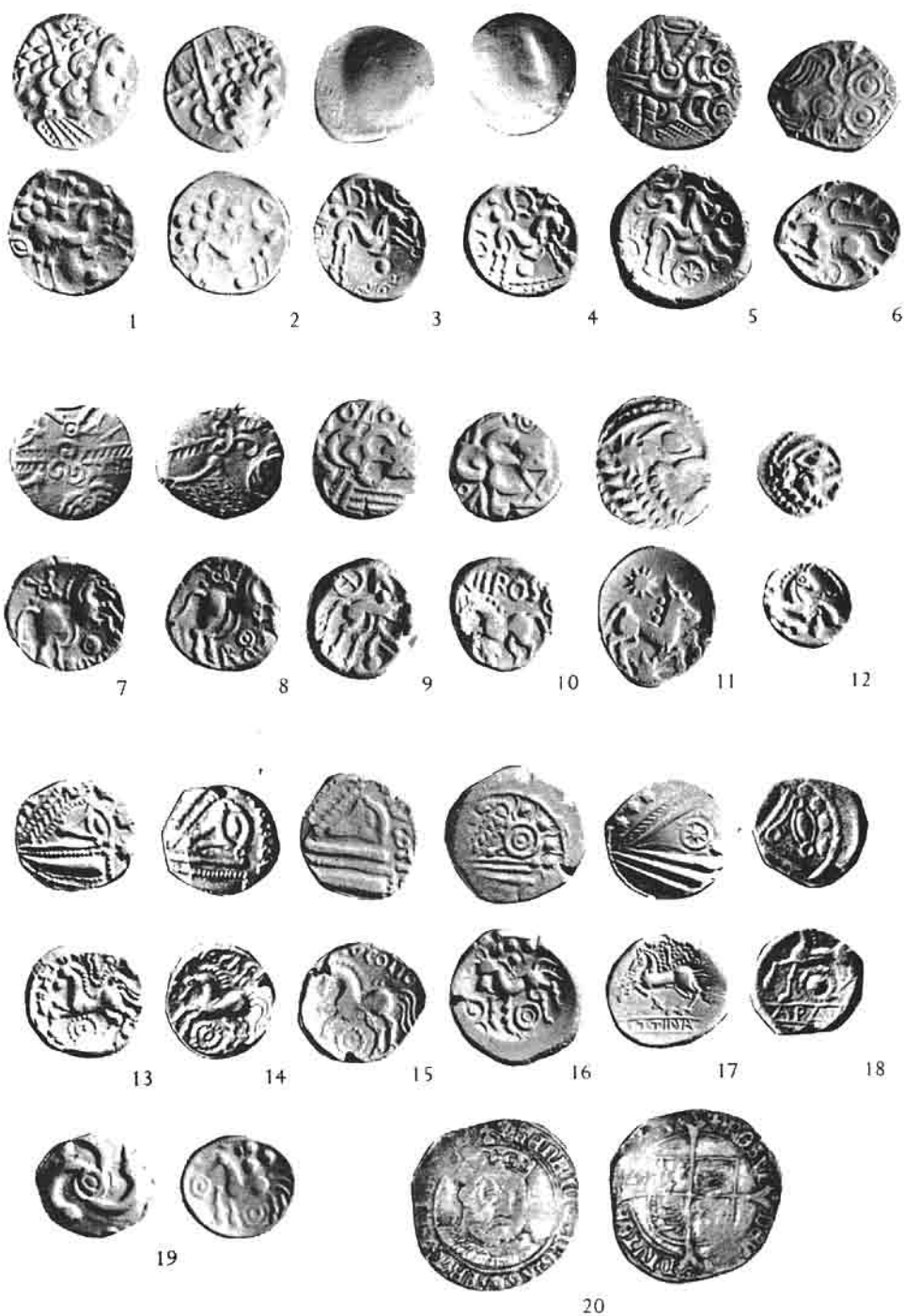
FIG. 5. Findspots of staters of the Eburones.

One important fact emerges from this account; from the time of the war against the Romans only staters of the 'Ambianic' or 'Belgic' type were current, and hoards of the time of Caesar contain nothing else. The only exception is the find made in 1905 between Reims and Châlons-sur-Marne, which contained 200 uniface staters of the *Ambiani* and 200 globular staters of Allen's Gallo-Belgic Class XB. There is every reason to believe that this treasure dates from the early days of the war.¹

It cannot be entirely by chance that several peoples began to strike coins of a common type at this time. The *Belgae* displayed an unusual unanimity, from the very beginning of the war, establishing for example a general assembly where manpower was assessed with a view to establishing an army. It is likely that during the assembly currency measures also were adopted: the striking of coins with related types and to the same standard; the withdrawal of all earlier coins to facilitate relations between tribes and to

¹ The globular staters with the type of a cross have a higher weight and gold content than the coins of 'Belgic' type; they are probably somewhat earlier. The weight varies between 7.20 g. and 7.29 g. Chemical analysis, several times repeated, of specimens from the Reims-Châlons hoard, gives the following gold fine-

nesses: 65 per cent, 67.5 per cent, 70 per cent, and 80 per cent. Cf. V. Tourneur, 'Une monnaie de nécessité des Bellovaques', *Gazette Numismatique*, 10, 1905-6, p. 83. It may be remarked that the uniface pieces known to come from this find belong to the earliest issues of the type.



finance the war.¹ This agreement will have brought to an end earlier, unrelated coinages, which from this time disappeared from continental currency, and left markets open solely to coins of 'Belgic' type.

The inception of this series of coins may accordingly be placed some time in the winter of 58-57, though we cannot determine the exact date more precisely. The end of each coinage must be related to the history of the issuing peoples and to their gold reserves. It is in any case certain that after 50 B.C., gold ceased to be struck on the Continent.

The war of 58-50 B.C. resulted in the last emigrations to Britain; the only coins of 'Belgic' type to reach this country were the uniface staters of the *Ambiani* and the uninscribed staters of the *Suessiones*. All other continental Belgic gold coins and their entry into Britain must be dated earlier than 58 B.C., for, as we have seen, they disappeared from continental circulation immediately after the outbreak of the Gallic War.

I am most grateful to Professor P. Naster for his encouragement of my researches into Celtic coinage. I should also like to thank the museums whose collections I have been able to consult: the British Museum, London; the Cabinet des Médailles, Paris; the Cabinet des Médailles, Brussels; the Badisches Landesmuseum, Karlsruhe; the Römisch-Germanisches Zentralmuseum, Mainz; the Bundessammlung von Münzen, Medaillen und Geldzeichen, Vienna; the American Numismatic Society, New York. The translation of this paper was provided by Dr. J. P. C. Kent.

LIST OF COINS ILLUSTRATED (PLATE I)

1. Bibliothèque Nationale, Paris, 8598
2. British Museum 1809
3. British Museum 1834
4. British Museum 1824
5. Bibliothèque Nationale, Paris, 8025
6. British Museum
7. Bibliothèque Nationale, Paris, 7631
8. Bibliothèque Nationale, Paris, 7632
9. British Museum
10. British Museum
11. Bibliothèque Nationale, Paris, 7321
12. British Museum
13. Karlsruhe, Badisches Landesmuseum
14. Bibliothèque Nationale, Paris, 8823
15. American Numismatic Society
16. Mainz, Römisch-Germanisches Zentralmuseum, O.25610
17. Brussels, Cabinet des Médailles
18. M. Dessewffy, *Barbar penzei*, Budapest, iii, 1910, pl. XXXX, 959
19. Vienna, Bundessammlung von Münzen, Medaillen und Geldzeichen, 26.691

¹ The *Treviri* were not members of the Belgic alliance, but they were certainly in touch with the *Belgae*; it would otherwise be difficult to account for

their participation in the same 'monetary union' and their striking of coins of the same typology and weight standard.

THE SEVINGTON HOARD OF 1834

C. E. BLUNT

A NINTH-CENTURY hoard of the first importance was dug up in 1834 on a farm at Sevington, North Wiltshire. Besides 70 coins there were a number of silver objects including a spoon and fork, and other objects in bronze, some gilt. In a paper read to the Society of Antiquaries of London in 1837 Edward Hawkins gave what, by current standards, can only be described as a tantalizingly slight account of the coins (though fortunately he illustrated ten of the most important) and some account of the associated objects, of which he illustrated nine, though he did not give a complete list of them.¹

The greater part (perhaps even the whole) of the hoard passed into the hands of Mr. C. W. Loscombe² of Pickwick House, Corsham. Thirteen of the associated objects (which was certainly not the total though probably the more important items) were acquired by the British Museum at the sale of Lord Londesborough's collections and are fully described and illustrated in D. M. Wilson's *Anglo-Saxon Ornamental Metalwork 700-1100 in the British Museum*.³

The account of the coins has been less complete, though J. Rashleigh recorded, by reigns, 37⁴ and M. Dolley and K. Skaare broke down those of Æthelwulf into types and raised Rashleigh's total of 14 for that reign to 22. They also discussed in some detail the significance of the find for the dating of Æthelwulf's various issues and reached the conclusion that the hoard was lost c. 850.⁵ It was no part of their object to list the coins and it is felt that this could now usefully be done, to the extent that the surviving evidence permits.

Hawkins's original account gives a total figure of seventy of which he says 'many were much defaced and some taken up in fragments'. Thirty, however, were in good preservation and the ten he illustrates can virtually all be identified today. There were coins, he says, of the following: Archbishops of Canterbury Wulfred and Ceolnoth; kings of Mercia Coenwulf, Ceolwulf, and Berhtwulf; kings of Wessex Egbert and Æthelwulf; king of East Anglia Athelstan. With the exception of those he illustrates the greater part were, he says, of types well known.

Loscombe's coin collection was dispersed in 1855⁶ and the sale catalogue of it shows that it included a general series of Anglo-Saxon coins, with emphasis on the ninth-century group that was typical of Sevington. The number of coins of the kings and archbishops given by Rashleigh in his summary agrees exactly with those in Loscombe's sale and this might be thought to confirm that all came from Sevington. But Rashleigh does not say how he made up his summary and there is evidence to show that the accuracy of his attempt to reconstruct the Trewhiddle hoard, though undoubtedly honest, is open to serious question.⁷ In the case of the Sevington hoard there is reason

¹ *Archaeologia*, xxvii (1838), pp. 301-5 and pls. xxiii-xxiv.

² That he pronounced his name Luscombe is suggested by the fact that Hawkins uses this spelling in his *Silver Coins of England*.

³ Pub. London, 1964, pp. 167-71.

⁴ NC 1868, p. 150.

⁵ *Anglo-Saxon Coins*, ed. R. H. M. Dolley, 1961, pp. 64 and 68-70.

⁶ Sotheby, 30 Mar. and 12 Apr. 1855 (nine days in all).

⁷ *Archaeologia*, xcvi (1961), pp. 109 ff.

to think that he may have made his reconstruction purely from the sale catalogue, in which case its value as corroborative evidence clearly vanishes. The main ground for this belief is that one of the coins of Archbishop Ceolnoth in Loscombe's sale (lot 1057) was of the type that shows the moneyer's name on the arms of a cross (Brooke 5, North 245). This type, which is plentiful for Æthelwulf and demonstrably came towards the end of his reign, is not represented among his coins in the Sevington hoard and its very absence has been one of the factors in dating the deposit.¹ If in fact there had been an archiepiscopal coin of this type in the hoard, one would have expected at least one specimen of the far more plentiful regal issue and, since it would, on Dolley's and Skaare's dating,² move the date of deposit to *c.* 855 at the earliest, one might also have looked for a coin of Athelstan's successor on the East Anglian throne, Æthelweard, whose reign numismatic evidence suggests began *c.* 850.

Until, therefore, it is possible to produce reliable evidence, such as a contemporary list of the coins found,³ it seems wiser to regard this coin of Ceolnoth's as one that Loscombe acquired from some other source. It has accordingly been omitted from the list that follows.

Nevertheless, with the reservation that Loscombe may have had a coin or two in the series independent of what he acquired from Sevington, it is reasonable to assume that the bulk of the relevant coins in the sale came from this source. There is nothing else that makes such an assumption inherently unlikely and indeed in the case of two coins of Athelstan there is independent evidence, dating from 1845, that they did so. Haigh illustrates them and says specifically that they are from Sevington.⁴ The reconstruction set out below is made on the basis of Rashleigh's summary, with the one exception mentioned, being correct. It also includes 13 further coins which, as Dolley and Skaare have pointed out, may confidently be regarded as from Sevington. These were in lot 1103 of the Loscombe sale where they are described as follows 'A parcel of fragments of the coins of Ethelwulf, with various Brass and Silver Ornaments, *all found together.*' The place of finding is not mentioned, but there can hardly be doubt, in this context, that it was Sevington. The lot was purchased at the sale by the British Museum, but it is possible that the ornaments are not now identified as being from that hoard. All the objects described by Wilson as from Sevington⁵ were bought at the Londesborough sale and there is no item in his volume that stems from the Loscombe sale.

The coin element of the hoard, as reconstructed here, may be summarized as follows:

Kings of Mercia			
Coenwulf (796–821)	4		
Ceolwulf I (821–3)	1		
Berhtwulf (840–52)	9	14	
	—		
Archbishops of Canterbury			
Wulfred (805–32)	2		
Ceolnoth (833–70)	4	6	
	—		
King of East Anglia			
Athelstan I (<i>c.</i> 827– <i>c.</i> 850)	5		

¹ *Anglo-Saxon Coins*, pp. 69–70.

² *Ibid.*, p. 73.

³ Mrs. Martin tells me that she has no knowledge of any manuscript list by Hawkins and I have failed to trace any of Loscombe's numismatic papers.

⁴ D. H. Haigh, *Numismatic History of the Ancient Kingdom of the East Angles*, 1845, pl. ii, 4 and 5 and pp. 7–8.

⁵ *Op. cit.*, pp. 167–71.

Kings of Wessex

Egbert (802-39)

1

Æthelwulf (839-58)

232449

A number of the coins in the hoard are of considerable interest. Of Berhtwulf No. 7, by the moneyer Eanred, is the only one of this type by this moneyer that is known; No. 14 is a slight variant, hitherto recorded seemingly on the authority of another fragment, this time from the 'Hampshire' hoard.¹ No. 26 of Egbert is unique as to type.² But the main interest lies in the coins of Æthelwulf, 11 of whose 23 types, according to the *BMC* classification, occurred in this hoard. In this respect it is only outdone by the great Dorking hoard which contained no less than 265 coins of this king.³ No. 33, the coin by Eanwald with the SAXO monogram, remains unique as to type and may well be the only surviving coin of this reign to have been struck at a Wessex mint. Of *BMC* type vii there was only one example in the Dorking hoard and only two appear to be known today. It is possible therefore that No. 36 is this second specimen which was lot 460 in the Lockett sale. The general similarity of the types of *BMC* xiii and xiv makes a distinction between them not easy when no illustration is available. Surviving specimens are, however, sufficiently rare to make it reasonable to believe that No. 42 is likely to be xiii of which two or three specimens by Osmund (without hoard provenance) are known, as against a single one (other than No. 44) of xiv, which is specifically recorded as being from the Dorking hoard. Equally, in the case of No. 43 by Herebeald, xiv is more likely; the only recorded specimen of xiii by this moneyer is from the Dorking hoard, whereas there is at least one other known of type xiv (Montagu 481) and it is without hoard provenance. The single specimen of type xv (No. 45) is intriguing. The moneyer Welheard is not otherwise recorded for this type though he is known of type xxiii which has a similar reverse. Dymock bought the coin in the Loscombe sale, but it does not appear in the catalogue of his own sale three years later and it cannot now be traced. On the other hand he records in his manuscript work on Anglo-Saxon coins⁴ a moneyer VVELH for this type which he reasonably equates with Welheard. Quite recently I acquired a large fragment of this same type on which the end part of the moneyer's name -HEARD appears. I too had equated this with Welheard. The break looks an old one and the two fragments cannot be part of the same coin: mine shows the entire reverse type, without some part of which Dymock could not have identified it as type xv. At the same time it may well not be the Sevington coin as there is no mention of this being broken.

Type xvi of Æthelwulf was not represented in the British Museum collection when the catalogue was made, but the specimen illustrated *BMC* p. 12 has since been acquired by

¹ Lindsay, *Heptarchy*, pl. 2, 45. This is a curious 'hoard'. Contemporary correspondence suggests that its component parts came to hand in the Southampton area in three or more groups in 1836 and 1837. It may not be that all the coins derived from the same find and it is just conceivable that the parcel of twelve coins of 'Berhtulf, Cialnoth, Egbert, and Ethelwulf' mentioned by Richard Sainthill in a letter printed *GM* 1838, vol. 2, pp. 374-5, and subsequently treated as being from the Hampshire find, could have been a group of 'strays' from Sevington. This cannot be

established at present but seems worth recording as a possibility in case further evidence pointing in the same direction should turn up. I am much indebted to Mr. Pagan for this information and reference which he gave when he was kind enough to read this paper in draft.

² Note that forgeries of this piece exist.

³ *Archaeologia*, xix (1818), pp. 109-19.

⁴ Manuscript volume entitled 'Saxon Coins' formerly in the possession of J. D. A. Thompson and now in the writer's.

it (BMA 428). It has a pedigree going back to the Shorthouse (1886) sale. It appears to be the only one known today and it may be the Sevington coin (No. 46) but the engraving in *Archaeologia* differs from it in detail. It too was bought by Dymock at the Loscombe sale but was not in his sale of 1858.

BMC type xxiii is another of Æthelwulf's very rare types. There were two coins of the type by the moneyer Ethelhere in the Dorking hoard, one of which is in the British Museum (*BMC* 89). Montagu 496 may be the second Dorking coin or equally the Sevington specimen (No. 47).

The absence of any coins of type xvii has been commented on above.

Hoard provenances for the coins of the last English kings of East Anglia are scarce, as the following table shows:¹

	<i>Deposit</i>	<i>Athelstan I</i>	<i>Æthelweard</i>	<i>Eadmund</i>
Suffolk (2)	c. 830	?	..	..
Middle Temple (5)	c. 842	39	..	..
Sevington (7)	c. 850	5	..	..
Dorking (11)	c. 861	3	16	3
Reading (25)	c. 870	..	..	1
Croydon (40)	c. 875	2	4	18
Gravesend (43)	c. 875	2	5	50

There have been isolated finds of Athelstan I at Bulwick, Northants.,² at Garboldisham, Norfolk,³ and near Rochester;⁴ of Æthelweard at Southampton⁵ and Ipswich.⁶ The occurrence of coins of Athelstan in the Sevington hoard marks the most westerly findspot that I have noted. There were none in the Trehiddle hoard from Cornwall, deposited c. 875.

The weights of the coins of Athelstan and of the contemporary kings Berhtwulf and Æthelwulf, as recorded in *BMC* and in *BMA*, suggest the possibility that the East Anglian mint(s) might be aiming at a slightly higher weight standard than the other two kingdoms. 48.8 per cent of the 43 coins of Athelstan weigh over 20 gr. compared with 23.8 in the case of the 21 of Berhtwulf and 28.2 of the 78 of Æthelwulf. This is something that might be worth further study, particularly in view of the remarks in Mr. Lyon's presidential address to this Society in which he notes that the weight of the St. Edmund Memorial coinage appears to have been barely five-sixths that of the mints in the area under English control.⁷ Certainly the metal used in East Anglia proved more suitable for coining: in any collection in which coins of the Mercian and Wessex kings are to be found there will normally be several that are more or less fragmented, whereas this is unusual in Athelstan's coins—a point borne out by the Sevington hoard.

A few corrections fall to be made to the list of Æthelwulf coins in the hoard recorded by Dolley and Skaare.⁸ There are thirteen, not twelve, more or less fragmentary pieces in the British Museum from lot 1103 of the Loscombe sale. There was a specimen of *BMC* type v, moneyer Diar (No. 34), the apparent absence of which they put down to its being an early issue; but I can find no trace of any of the much rarer type va; they

¹ The numbers in brackets refer to Dolley's hoard list, published in *SCBI* Hiberno-Norse, 1966. The deposit dates are from the same source.

² *NC* 1864, p. 190.

³ *SNC* Nov.-Dec. 1919, p. 435, no. 76229.

⁴ *SCBI* Copenhagen, no. 95.

⁵ C. R. Smith, *Collectanea Antiqua*, iv (1857), p. 59.

⁶ *Proc. Suffolk Inst. of Arch.* xxix (1963), p. 286.

⁷ *BNJ* xxxix (1970), p. 195.

⁸ *Anglo-Saxon Coins*, p. 68.

record four specimens of type xi whereas there appear to have been five; they give a total of six for the rare type xiv, when it seems likely, for the reasons already given, that there were only two of this type and one of the hardly less rare type xiii. The balance of three arises, one suspects, from their having included in their total two coins (Nos. 48–9) of which no particulars are given and perhaps one of those of type xi. These changes, however, do nothing to affect the conclusions as to dating at which the authors arrive.

RECONSTRUCTION OF THE COINS IN THE HOARD

References and abbreviations:

BLS. C. E. Blunt, C. S. S. Lyon, and B. H. I. H. Stewart, 'The Coinage of Southern England 796–840'. *BNJ* xxxii (1963), pp. 1–74.

BMA. G. C. Brooke, 'Anglo-Saxon Acquisitions of the British Museum'. *NC* 1922, pp. 214–44; 1923, pp. 243–59; 1924, pp. 239–53.

BMC. A Catalogue of English Coins in the British Museum, Anglo-Saxon Series, i, 1887; ii, 1893.

Brooke. G. C. Brooke, *English Coins*, 3rd edn., 1950.

Haigh. D. H. Haigh, *Numismatic History of the Ancient Kingdom of the East Angles*, 1845.

Hks. References are to the coins as numbered on plate xxiii accompanying E. Hawkins's original report of the hoard in *Archaeologia*, xxvii, 1838.

L. = lot numbers in the Loscombe sale, 1855.

North. J. J. North, *English Hammered Coinage*, i, 1963.

'Not identifiable' means that the Sevington specimen cannot be identified with confidence today.

SCBI Mack. *Sylloge of Coins of the British Isles*, R. P. Mack Collection, forthcoming.

SCBI Norweb. *Ibid.*, Mrs. E. M. Norweb Collection, 1971.

SNC. Spink's Numismatic Circular.

KINGS OF MERCIA

Coenwulf (796–821)

Type: Pincer cross. North 347; Brooke group ii.

1. Beornfreth. L. 1032a. BLS 35–6. Not identifiable.

2. Diormod. L. 1033. BLS 37 or 44. Not identifiable.

Type: Cross and crescents. North 357; Brooke group iii.

3. Eahlstan. L. 1031 = *BMC* 71. Hks. 3. BLS 79. 22 gr.

Type and moneyer not recorded.

4. L. 1032b. 'Very poor'. Not identifiable.

Ceolwulf I (821–3)

Type: Moneyer's name in three lines. North 387; Brooke group iii.

5. Oba. L. 1040. BLS 1. Not identifiable.

Berhtwulf (840–52)

Type: Cross crosslet. North 406.

6. Brid. L. 1037a. Hks. 5. Reads γ ONET. Not identifiable.

Others recorded read γ ONETA.

7. Eanred. L. 1034 = *SCBI* Mack 605. Hks. 6. 17.3 gr.

Type: Cross with two arms crosslet, two moline. North 408.

8. Deneheah. L. 1035. Not identifiable.

Type: Cross with annulet in each angle. North 410.

9. Deneheah. L. 1036 = *SCBI* Norweb 100. Hks. 4. 19.6 gr.

Type: Cross crosslet with annulet centre (sometimes enclosing a pellet). North 414.

10. Deneheah. L. 1037b. Catalogue description leaves some doubt as to the type, but this seems most likely. Not identifiable.

11. Deneheah. L. 1103 = BM. Fragment.

12. Deneheah. L. 1103 = BM. Fragment.

13. Deneheah. L. 1103 = BM. Fragment. Reverse legend appears to be retrograde.

Type: Cross crosslet with cross saltire in centre. North 413.

14. (Bu)rn(v)vald. L. 1103 = BM. Fragment.

ARCHBISHOPS OF CANTERBURY

Wulfred (805–32)

Type: Early; bust contained in circle; rev. transitional monogram. North —; Brooke 5.

15. Sæberht. L. 1055 = Lockett 3552. Hks. 1. BLS 3 (c). 21 gr.

Type: Late; rev. DRVR CITS in two lines. North 239; Brooke 1.

16. Swefherd. L. 1056 = Lockett 335. Hks. 2. BLS 17 (c). 22 gr.

Ceolnoth (833–70)

Type: Rev. degraded monogram. North 241; Brooke 1.

17. Wunhere. L. 1059. 'Poor'. Not identifiable.

18. Wunhere. L. 1060a. 'Poor'. Not identifiable.

19. Wunhere. L. 1060b. 'Poor'. Not identifiable.

Type: Chi-rho. North 242; Brooke 2.

20. Biorn(mod). L. 1058, bt. Brice. Not identifiable. Marsham 115 by this moneyer said to be ex Loscombe, but types differ.

KING OF EAST ANGLIA

Athelstan I (c. 827–c. 850)

Type: *Obv.* A (without inner circle?); *rev.* cross with pellet in each angle. North 440.

21. Torhthelm. L. 1041, where the unusual obverse reading ePELTSAI is noted. Perhaps = Montagu i, 342 (ill.) which has this reading.

Type: *Obv.* and *rev.* cross with or without a pellet in each angle. North 446.

22. Mon. *Obv.* pellets; *rev.* none. L. 1043, bt. Brice = BMA 249. Hks. 10. Haigh, pl. ii, 6. 19 gr.

23. Mon. *Obv.* and *rev.* pellets. L. 1044, bt. Dymock = lot 75 in his sale (1858). Not identifiable.

24. Tuduwine. *Obv.* and *rev.* no pellets. L. 1042 = Lockett 3604. Haigh, pl. ii, 4. 20½ gr.

25. Moneyer not recorded. L. 1045. Not identifiable.

KINGS OF WESSEX

Egbert (802–39)

Type: Early. Head within circle; *rev.* tribrach moline. *BMC* ix; North 561; Brooke 17.

26. Werheard. L. 1061 = *BMC* 16. Hks. 7. 20·7 gr.

Æthelwulf (839–58)

Type: DORIB/CANT. *BMC* i; North 614; Brooke 5.

27. Ealgmund. L. 1068b, bt. Dymock. Not identifiable.

28. Ealgmund? Fragment. Small lettering. L. 1103 = BM.

29. Hunbeaht. Small lettering. L. 1103 = BM.

30. Maninc. L. 1069. Not identifiable.

31. Maninc. Large lettering. L. 1103 = BM.

Type: CANT/DORIB. *BMC* ia; North 616; Brooke 5.

32. Hunbeaht. L. 1103 = BM.

Type: SAXON monogram/cross and wedges. *BMC* iv; North 598; Brooke 9.

33. Eanwald. L. 1068a = *BMC* 25. Hks. 8. 19·6 gr.

Type: Cross over saltire / SAXONIORUM. *BMC* v; North 596; Brooke 10.

34. Diar. L. 1067b. Not identifiable.

Type: Bust / chi-rho. *BMC* vi; North 608; Brooke 7.

35. Deiheah. Fragment. L. 1103 = BM.

Type: Bust / A. *BMC* vii; North 609; Brooke 7.

36. Osmund. L. 1066b. Not identifiable.

Type: Bust / cross crosslet. *BMC* xi; North 610; Brooke 7.

37. Deiheah. L. 1065a, bt. Dymock. Not identifiable.

38. Diar. L. 1103 = BM.

39. Herebeald. L. 1067a. Not identifiable.

40. Man(na). Obv. legend appears to be retrograde. L. 1103 = BM.

41. Unidentifiable moneyer. Fragment. L. 1103 = BM.

Type: Bust / cross over saltire. *BMC* xiii; North 612; Brooke 7.

42. Osmund. L. 1064a. Not identifiable.

Type: Bust / cross over saltire pommée. *BMC* xiv; North 613; Brooke 7.

43. Herebeald. L. 1063a. Not identifiable.

44. Osmund. Two fragments. L. 1103 = BM.

Type: Large bust / cross, two arms moline. *BMC* xv; North 600; Brooke 2.

45. Welheard. L. 1066a, bt. Dymock. Not identifiable.

Type: Large bust / cross, two arms crosslet. *BMC* xvi; North 601; Brooke 2.

46. Maninc. L. 1062, bt. Dymock = ? BMA 428. Hks. 9. 16.5 gr. (slightly chipped).

Type: Cross over saltire / cross, two arms moline. *BMC* xxiii; North 607; Brooke 4.

47. Ethelhere. L. 1065b. Not identifiable.

Type and moneyers not stated.

48. L. 1063b.

49. L. 1064b.

AN UNPUBLISHED FRAGMENT OF A COIN OF CEOLWULF II

H. E. PAGAN

OF King Ceolwulf II of Mercia not much is known. An entry in the *Anglo-Saxon Chronicle* for 874 records that after the expulsion of King Burgred (852–74) by a Viking army the Vikings ‘gave the kingdom of the Mercians to be held by Ceolwulf, a foolish king’s thegn; and he swore oaths to them and gave hostages, that it should be ready for them on whatever day they wished to have it, and he would be ready, himself and all who



FIG. 1.

would follow him, at the enemy’s service.’¹ The same work shows that after a year’s stay in Cambridge in 875–6 and a campaign in Wessex in 876–7 the Viking army ‘went away into Mercia’ at harvest time in 877 and ‘shared out some of it, and gave some to Ceolwulf’.² It is customarily assumed that this gives the date for the division of the ninth-century Mercian kingdom into a western half which remained under English rule and the eastern half which became known as the Danelaw.³ The *Anglo-Saxon Chronicle* does not otherwise refer to Ceolwulf but it is evident from an entry in it for 886 recording the submission of all the English who were not under Viking subjection to King Ælfred of Wessex that Ceolwulf’s reign had ended in or before that year.

This picture can be amplified from the evidence of charters and coins. Charters show that Ceolwulf’s authority was recognized in the West Midlands in 875 and that his sphere of influence extended as far as Oxfordshire.⁴ Another, dated 883, relates to property in the same part of the country but is issued not by Ceolwulf but by Æthelred, *ealdorman* of Mercia, which suggests that Ceolwulf’s reign may have been over by 883 rather than 886.⁵ Coins, though not numerous, are sufficient to show that Ceolwulf had the services of moneyers who had worked for his predecessor Burgred and as Burgred’s mint was—or appears to have been⁶—at London it is not unreasonable to suppose that Ceolwulf’s coinage was struck at London also. This would allow the deduction that Ceolwulf was

¹ Entry for 874 as translated in *The Anglo-Saxon Chronicle*, ed. Whitelock and others, London, 1961, p. 48.

² Entry for 877 as translated *ibid.*

³ The army itself did not penetrate deeply into Mercia in 877—it probably did not get much beyond Gloucester, where Æthelweard records that it ‘built booths’—and it left Mercian territory for Chippenham very early in 878. It is possible that the division of land

referred to was a temporary one relating to land in the south of Mercia and that the west–east partition took place on another occasion. See below p. 119.

⁴ Stenton, *Anglo-Saxon England*, Oxford, 1943, p. 249 and footnote 3.

⁵ Stenton, *op. cit.*, p. 257.

⁶ H. E. Pagan, ‘Coinage in the Age of Burgred’, *BNJ* xxxiv (1965), pp. 11–27, especially pp. 11–14 and 26–7.

recognized as king there and that would accord with evidence that London was administered by the *ealdorman* Æthelred rather than by West Saxon kings in the period 886–911.

The coins of Ceolwulf so far published number nine. One is of 'Two Emperors' type and by the moneyer Ealdwulf, and the others have as their reverse type a long cross with voided lozenge centre and are by the moneyers Cuthulf, Dealinc, Dudecil, Dunna, and Liafwald. All these moneyers except Dunna worked under Burgred and Cuthulf, Dealinc, Ealdwulf, and Liafwald struck coins for Burgred which can be attributed to the London mint and dated 870–4. Dudecil's coins for Burgred are of a different character; the most likely explanation for this is that those which are known today were struck at London rather earlier in the reign than 870–4, but another explanation might be that they were struck at some other mint.¹

The purpose of the present note is to put on record a fragment of a tenth coin of a new type which may provide fresh information about the extent of Ceolwulf's kingdom and the duration of his reign. The coin is not altogether unknown to numismatists nor is its attribution to Ceolwulf a novel one; it came to the British Museum in 1956 as part of a collection bequeathed by Mr. T. W. Armitage² and accompanying tickets show that Armitage recognized it for what it was and that Mr. Dolley when a member of the staff of the Department of Coins and Medals was also of the opinion that it was a coin of Ceolwulf and of a new type. It is, however, unpublished and there has not even been a passing reference in print to its existence. The deterrent factor has been, and remains, the interpretation to be given to a circumscriptinal inscription on the reverse of which all that is visible on the fragment are the letters CO. Armitage's ticket shows that he supposed this to be a mint signature and proposed to supplement it LIN]CO[LLA. If the supplement is correct this would be the earliest coin of the Lincoln mint known and its existence would cast a new light on the history and monetary organization of Mercia at this period. If it is not correct it would be necessary to propose some convincing alternative, and no such alternative has so far been found.

The fragment (ill. Fig. 1 and Fig. 2) may be described thus:

O.]CEO[L? Profile bust, to r.?, within beaded inner circle.

R.]ANR[E? Central ornament, character uncertain, surrounded by circumscriptinal inscription]CO[; all within inner beaded circle.

That obverse is obverse and reverse reverse is certain, for the visible part of the design within the inner circle on the side with inscription CEO can only be interpreted as the curly hair at the back or top of a ruler's head and on Anglo-Saxon coins a ruler's head is found only on the obverse. Having established that, it will follow that the coin must have been struck by one of the two ninth-century Mercian kings called Ceolwulf or by Archbishop Ceolnoth of Canterbury (833–70), as these are the only issuers of coin in the Anglo-Saxon period in whose names the letters CEO appear consecutively. Considerations of style and type naturally associate the coin with Ceolwulf II or with Archbishop Ceolnoth rather than with Ceolwulf I (821–3), whose issues have larger lettering and plain inner circles, and Armitage's ticket provides the information that the coin's provenance is 'Cuerdale sweepings', which must mean that it was struck after the middle of

¹ See below, p. 19, where their resemblance to coins of Burgred by a moneyer Eanred is noted. They also resemble coins of Burgred by the moneyers Duda,

Dudeman, Tata, and Wine.

² It is registered as E 4185.

the ninth century and favours an attribution to Ceolwulf II in preference to the archbishop; the Cuerdale hoard was deposited *c.* 903 and virtually all the coins in it were struck after *c.* 875.¹ Further ground for supposing that it is not a coin of the archbishop is provided by the visible curly hair, for coins of Ceolnoth struck before *c.* 866 invariably carry a facing tonsured bust without curls and coins of Ceolnoth's profile type struck in 866–70 have curls only as adjuncts at the edges of the tonsure. It is not likely that an ecclesiastic could be represented with the full head of hair evident from the fragment. There is also extensive hoard evidence for the period 866–74 which goes to show that all coins struck in Ceolnoth's name in 866–70 were of one reverse type, an arrangement of a moneyer's name and the word *MONETA* in three lines, which is not the reverse type of this coin.

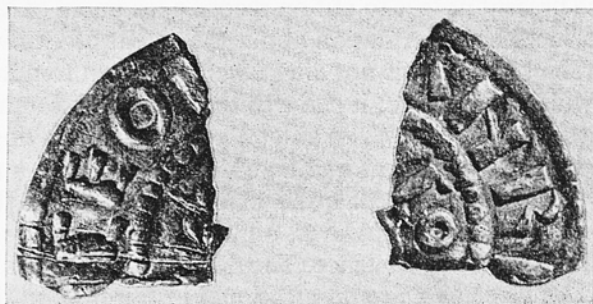


FIG. 2.

The coin must then be of Ceolwulf II and the obverse legend is presumably to be supplemented *CEO*[*L**V**V**L**F* *R**E**X*] or *CEO*[*L**V**V**L**F* *R**E**X* *M*], which are the two renderings of Ceolwulf's royal style found on coins already known. Study of the fragment supports the view that the legend begins *CEOL*, the letter after *O* on it beginning with a vertical stroke as the letter *L* would, but otherwise provides only the negative information that there was no initial cross before the king's name. What is visible before *CEO* appears instead to be a straight line extending from the edge of the coin into the inner circle and if this is the case it is likely to represent the shoulder of the king's bust; there exist coins of Burgred struck after 870 on which the king's shoulders are represented by single straight lines of this character.

On the reverse, the outer inscription is easy enough to supplement. The letters *ANR* are clear—only the top and the right-hand limb of the *A* are really visible, but it certainly is the letter *A*—and it is natural to see them as part of a moneyer's name. A moneyer's name followed by the word *MONETA* in a full or contracted form was an essential part of the legend of an Anglo-Saxon coin of this date and given this particular reverse type it must appear in the outer inscription as only there would there be room for both the name and the letters *MO* or *MONETA*. Of possible names *E*] *ANR*] *ED* would accord with the letters visible and the fact that the letter after *R* begins with a vertical stroke; if the coin was less well executed *ANR* could be a rendering of the *AHR* of a name

¹ There is a summary list of the coins of Ælfred in the Cuerdale hoard in C. E. Blunt and R. H. M. Dolley, 'The Hoard Evidence for the Coins of Ælfred', *BNJ* xxix (1959), pp. 220–47. Coins of Ceolwulf from Cuerdale are listed by R. H. M. Dolley, 'An Unpub-

lished Hoard-Provenance for a Penny of Ceolwulf II of Mercia', *BNJ* xxxii (1963), pp. 88–90, where the nine whole coins of the king are catalogued and illustrated.

such as Beahred, but ANR seems in this instance deliberate and Eanred is known as a moneyer for Burgred while Beahred is not (though see below, p. 20, for remarks that indicate that this last may not be a relevant consideration). There would be sufficient room after EANRED for the word MONETA in full and there might perhaps be room after MONETA for two or three further letters or some other space filler; there are coins of Archbishop Ceolnoth dating from c. 850 with circumscriptional reverse legends such as LIL MONETA DORVER and DIALA MONETA DORO, the extra letters forming a mint signature, and there is a coin of a king Eanred of the same date with a symbol filling space after DES MONETA.¹

The inner inscription is a shorter one, probably of not more than eight letters. There are perhaps four things that it might have been intended to convey: a mint signature; the name of a kingdom, district, or people ruled by Ceolwulf; the name of another ruler ruling jointly with Ceolwulf; or an abstract concept. There are instances of such inscriptions on other coins struck in England and in Western Europe during the ninth century, and the only other kind of inscription ever found is that giving a moneyer's name, which it has just been seen is a role performed on this coin by the outer inscription. It is to be noted at this point that if the outer inscription in fact ended with a mint signature this would not mean that the inner inscription necessarily conveyed something else, for there could be a carry-over of the mint signature, e.g. if the outer inscription ended MONETA LIN the inner inscription might read COLLA, COLLA CIV, or whatever was necessary to complete the reading; the inner inscription might even just be a word such as URBS, CIVITAS, or VILLA.

When it comes to making a choice between the kinds of inscription outlined the governing considerations are the need to find a legend that would be of the particular kind and would incorporate the letters CO and the requirement that when the reverse of the coin is considered as a whole there should if possible be a contemporary parallel for it. These considerations tell against the second and fourth possibilities. It would be perfectly possible from a theoretical point of view that the inscription should give the name of a country, district, or people ruled by Ceolwulf—coins of Æthelwulf with a moneyer's name and the word SAXONIUM on the reverse provide an exact parallel²—but no territorial name incorporating the letters CO and with Mercian connotations seems to exist. Conversely, it would not seem impossible in practice to find a word such as PAX or CRUX but incorporating the letters CO that would fit the space required, but there is unfortunately no ninth-century parallel for the use of an abstract legend of this kind without an accompanying type to which it relates. Ninth-century coins with the legend MUNUS DIVINUM carry the type of a wreath and ninth-century coins with XPSTIANA RELIGIO (Christiana Religio) carry a church.³ It does not seem probable that a single abstract word other than PAX or CRUX, which are words themselves customarily accompanied by the type of a cross, would have so clear a reference that the engraver could inscribe it by itself.⁴

¹ J. J. North, *English Hammered Coinage*, vol. i, London, 1963, pl. iii, nos. 7 and 8, and pl. viii, no. 26; the Eanred coin is also illustrated G. C. Brooke, *English Coins*, London, 1932 and subsequently, pl. iii, no. 2.

² North, *op. cit.*, pl. viii, no. 11; Brooke, *op. cit.*, pl. xii, no. 11.

³ In K. F. Morrison and H. Grunthal, *Carolingian Coinage*, New York, 1967, 465 pp.+xlvi plates, there is a useful introductory chapter on 'Interpretation of Types' (pp. 22–31), where pieces with these legends are discussed.

⁴ There are late ninth-century issues of the York mint with the inscriptions DNS DS REX and MIRABILIA

The possibility that the inscription provides the name of another ruler does not seem any more likely, for a name with *co* in it cannot be that of Ælfred, Halfdene, or Guthrum (Æthelstan II) and there is no evidence for the rule of other kings in the area at the period. Yet the possibility cannot quite be rejected out of hand, for there is at least one reason for taking it seriously. This is the fact that when the reverse type is considered as a whole it appears to be paralleled by the obverse type of some rare coins struck in the 870s by Carolingian rulers on which there are similar circumscriptive inscriptions of which the inner gives the name of a king. The coins in question are coins struck at the Lotharingian mints of Metz and Marsal.¹ Their exact date is uncertain, for the king Louis whose name they carry may either have been Louis the German (d. 876) or his son Louis the Saxon (876–82) but both attributions would allow their having had an influence on Ceolwulf's die-engraver's choice of type.² That there is a relation could be argued not merely from the resemblance the coins bear to each other and from the coincidence of date, but from the fact that the coins of Metz and Marsal are as exceptional among contemporary Carolingian issues as that of Ceolwulf is in the English series; and that the relation, if there is one, would be that of English imitation to Carolingian original is indicated by the Carolingian coins' superior style and by the fact that on them the circumscriptive design occupies the more dominant obverse position.

It does not necessarily follow that Ceolwulf's die-engraver would have chosen to place a king's name where the Carolingian engraver did, for the relationship may only be between the designs, but the parallelism does at least make it possible that he acted thus. He was, however, producing a reverse die, not an obverse die, and in the absence of any suitable regal candidate the presumption must be on balance that the word with *co* in it is not such a name. Just worth a glance is the possibility that the engraver copied the inner inscription wholesale from such a Carolingian model and that the *co* word is *LVDONVICVS* carelessly rendered, but this seems out of keeping with the coin's otherwise deliberate execution.

This leaves the possibility that the word is a mint signature. If the letters *co* come in the name of the mint town and the mint town is one where mint signed coins were struck at some other date before the Norman Conquest, which are both reasonable supposi-

FECIT (to be taken together, though on different sides of the coin) on which the only type is a cross; connection between the type and the legend is therefore a little vague, but there is a connection and the legend is full enough to make up for any lack of explicitness about the type.

¹ Morrison and Grunthal, *op. cit.*, p. 270, nos. 1241 and 1243. The coins of Metz resemble that of Ceolwulf most closely and it is interesting to see that on them the central ornament within the inner inscription is a lozenge from the corners of which four short vertical limbs spring; there is a line on the Ceolwulf coin coming away from the central ornament below and to the right of the *o* of *co* and it may be a limb of the same character.

² Morrison and Grunthal, *ibid.*, attribute these coins to Louis the Stammerer (877–9) or to his son Louis III (879–92), kings of the West Frankish branch of the Carolingian house. This is incorrect, for a

partition of Lotharingia in 870 gave '*civitatem Mettis cum omnibus villis in eo consistentibus*' to Louis the German and Metz remained in his family for the rest of the century (cf. C. Robert, *Études Numismatiques sur une partie du Nord-Est de la France*, Metz, 1852, pp. 16–17, where the text of the treaty making the 870 partition is given in full; and for a modern account of the history of the area after 870 see E. Hlawitschka, *Lotharingen und das Reich an der Schwelle der Deutschen Geschichte*, Stuttgart, 1968, 258 pp., which is particularly useful for the period 887–911).

Of other coins attributed by Morrison and Grunthal to Louis the Stammerer or Louis III those of Huy, nos. 1231–4, Namur, nos. 1235–8, Trier, no. 1239, and a coin of Metz of a different type, no. 1242 (for which the hoard provenance is Rennes, not Saumeray as given), are better attributed to Louis the Child (900–11); and coins of Rheims, nos. 1246–50, and of Paris, nos. 1251–2, appear to be of mid-tenth-century date and are most probably of Louis IV (936–54).

tions, the coin must, it would appear, have been struck at Lincoln or Colchester, as these are the only mint towns between Thames and Humber in the mint signatures of which the letters CO would appear. Of the two Lincoln is much the more probable; statements in the *Anglo-Saxon Chronicle* that Essex belonged at the time to Wessex and not to Mercia are not perhaps altogether decisive on the point,¹ but even so, Lincoln, a major city where a mint was certainly in operation by the end of the ninth century,² is a much more likely candidate than Colchester, of which the earliest Anglo-Saxon coins otherwise are coins of Æthelred II (978–1016).³ There is also the argument that a mint signature of Lincoln, whether LINCOLLA, LINDCOL, or LINCOL, could be fitted more easily into the space available than one of Colchester.

Armitage's supplement LIN]CO[LLA is thus a supplement to which the logic of the situation points. It does not follow that it is correct, for the actual legend may prove to be one which could not reasonably be foreseen, but it is a sufficiently probable supplement for it to be profitable to consider the consequences it entails for knowledge of Ceolwulf and his coinage. There are three of importance. First, it would indicate that Ceolwulf's authority was recognized at Lincoln, and that is not by any means improbable; suggestions that Ceolwulf's kingdom was from the start confined to the West Midlands rest on the absence of the bishops of Leicester and Lindsey from among signatories of his charters, but this may as readily be ascribed to their age, their health, or the difficulties of travel to the Mercian court as to their not giving their allegiance to Ceolwulf. Second, should the design of the coin be copied from the design of the coins of Metz and Marsal and should these be of Louis the Saxon (876–82), which is the attribution favoured by the best continental opinion,⁴ it would seem that Ceolwulf's coin cannot have been struck earlier than c. 877 and may have been struck after 877; this would raise questions about the date at which the Danelaw formally passed out of English control. Third, and this is the consequence of most immediate import to numismatists, the juncture of the moneyer's name Eanred and the Lincoln mint signature would raise the question whether coins of Burgred by the moneyer Eanred were struck at Lincoln also, and, if so, whether any other ninth-century Mercian coins without mint signature were struck at Lincoln. This issue is one that must be considered in detail in a future study of the coinage of Burgred and it would be inappropriate to say much about it here, but it should be said that the coins of Burgred by Eanred very much resemble coins of Burgred by Dudecil and that as with Dudecil the possibilities are either that the coins were struck at London some time well before the end of Burgred's reign or that they were struck nearer the end of Burgred's reign at a different mint; the first view was

¹ Entries in the *Chronicle* for 839 and 855 describe members of the West Saxon royal house as being, *inter alia*, kings of the East Saxons, but the references to the East Saxons are not made in all manuscripts of the *Chronicle* and it may be that they are interpolations. London certainly remained in Mercian hands until the 870s and it would have been difficult for West Saxon kings to have ruled Essex if Essex was separated from their kingdom by Mercian territory.

² For the Lincoln mint H. R. Mossop, *The Lincoln Mint c. 890–1279*, Newcastle upon Tyne, 1970, cii plates, is essential reading. There are six coins of the mint that may be dated before 900; they are described in Mossop, *op. cit.*, facing pl. i, as 'Viking copies of

coins of Alfred', but the copying is not slavish and they may reflect a distant allegiance to Ælfred felt locally in the 890s.

³ The mint did not open until Æthelred's *Crux* type, struck c. 991–c. 997.

⁴ Such was the view of Longpérier, *Collection Rousseau*, 1847, p. 230, and it was also the view of Robert, *op. cit.*, pp. 207–8, and of Engel and Serrure, *Traité de Numismatique du Moyen Âge*, 1891, vol. i, pp. 260–1. Engel and Serrure remark of the coins that 'ces pièces peuvent compter au nombre des monuments les plus beaux que nous aient laissés les rois de la deuxième race'.

the one taken in a paper by the present writer written in 1965¹ and is the view to which he still inclines—on this view the Eanred at London and the Eanred at Lincoln would be different persons or one man resuming production at a different mint after a gap of some years—but the second view is one which must now be ventilated.²

¹ *BNJ* xxxiv (1965), p. 13.

² I must express my thanks to Miss M. M. Archibald, who drew my attention to the coin in the BM trays at a time when it was not incorporated in the

main collection, and has generously waived her own claim to publish it; and to Mr. C. E. Blunt who with his usual kindness read and commented on an earlier draft of this paper.

THE ORIGINS OF THE MINTS OF HERTFORD AND MALDON

C. E. BLUNT

THE *Anglo-Saxon Chronicle* records, s.a. 912 in the Parker manuscript, that in that year 'King Edward ordered the northern borough at Hertford to be built, between the Maran, the Beane, and the Lea, and then after that in the summer, between Rogation days and midsummer, King Edward went with some of his forces into Essex to Maldon, and camped there while the borough was being made and constructed at Witham, and a good number of the people who had been under the rule of Danish men submitted to him'.¹

It comes as no surprise therefore to find the names of both boroughs on coins of his successor, Athelstan, 924-39. All, however, are of the greatest rarity.

What is probably the earliest mint-signed coin of these two boroughs is a unique penny from the Forum hoard, now, with the remainder of that hoard, in the Museo Nazionale at Rome. It combines an obverse of the two-line type (*BMC* i, North 668) with a reverse of the cross type (*BMC* v, North 672). The obverses of the two types are generally similar but may be distinguished by the fact that on the two-line type the obverse legend ends REX, whereas on the cross type the REX is followed by some abbreviation of *Totius Britanniae* (or rarely, at one or two Mercian mints, of *Saxorum*). The moneyer's name is Abonel which is followed by the unusual MON TO before the mint-name, HIORTFD.

Of Athelstan's crowned bust type (*BMC* viii, North 673) three specimens of Hertford are recorded, two probably from the same dies, the third from the same obverse but a different reverse die. The moneyer again is Abonel, followed by the normal MO. The mint on both dies reads HIORT. A small feature, found on both reverse dies, is a trefoil of pellets in the field at 9 o'clock. It is curious that all three specimens should be in continental collections. Two are from local hoards; the provenance of the third is not known.

Of Maldon there is only known a single coin of Athelstan. It is of the crowned bust type, is by the same moneyer, Abonel, and is from a very similar obverse die (if not actually the same) as his Hertford coins. On the reverse the mint name is MAEL-D. There is nothing between the moneyer's and the mint names but the trefoil of pellets is again found, this time at the beginning of the reverse legend.

In addition to these five mint-signed coins by Abonel, three specimens are known, all from different dies, of the two-line type which, of course, has no mint signature. On two of these (Forum hoard and Berlin) there is the large, somewhat coarse, lettering that is associated with the north-eastern part of the country, and in the third (Edinburgh) it is still coarse but not so large. This last reads mō; on the others the moneyer's name alone appears. None of the obverse dies links with the mule.

Abonel is an interesting name and its origin must remain uncertain.² It is not recorded on coins of Edward the Elder, but in the form Abenel on coins of Athelstan II of East Anglia.³ The *British Museum Catalogue* records the same reading on a coin attributed to

¹ *The Anglo-Saxon Chronicle*, a revised translation ed. by D. Whitelock, London, 1961, p. 62.

Conquest, ed. P. Clemoes and K. Hughes, Cambridge, 1971, p. 185.

² The question is discussed in *England before the*

³ *BMC* 90; *SCBI* Cambridge 456; *SCBI* Oxford 63.

Alfred (*BMC* 190) but the obverse reading suggests that this may rather be of Athelstan II. The same name, in a variety of forms, is found in the St. Edmund Memorial coinage (e.g. *BMC* 117–28). It is not found, however, for Athelstan (of all England) on any mint-signed coins other than those of Hertford and Maldon and it is fairly safe to attribute the unsigned coins of this King to one or other of these mints. If this is correct, it is interesting to find dies of the mint-signed coins emanating, as far as one can judge from style, from London and those of the two-line type from another die-cutting centre, probably further north.

It is recognized that Athelstan's coins with the crowned bust were produced in Wessex and Kent, with London, and in East Anglia. They are not found in Mercia at all; in Northumbria very rarely; and, in very crude form, in a somewhat undefined area probably in the north-eastern part of the country. That they should be found of the Hertford mint need cause no surprise. It is recorded in versions D and E of the *Anglo-Saxon Chronicle*, s.a. 910, that 'King Edward succeeded to London and Oxford and to all the lands which belonged to them'¹ and Hertford would have 'belonged' to London. It is, however, more surprising, and of no little interest, to find Maldon in Essex included in this way.

Under Edmund (939–46) no mint-signed coins are recorded of either Hertford or Maldon—indeed Maldon does not reappear as a mint until the last type of Edgar—but a few coins with the name of Abenel or Abunel are known of the two-line type. The lettering on these is of a style which is associated with the southern part of the country and there is every reason to believe that the coins in question come from either Hertford or Maldon.

Of Eadred (946–55) I have found no coins by Abonel or variants of the name.

With Eadwig (955–9) Abenel again appears, this time on a mint-signed coin of the three-line type (*BMC* ii, North 727) on which the mint name reads HIR. There is, exceptionally, an extra cross in the obverse field, which may be compared with the trefoil of pellets in the reverse field of Athelstan's crowned bust coins. Brooke when recording this coin in his report on British Museum acquisitions since the *Catalogue* was published² described it as 'Hertford?' but by the time he published his *English Coins* was prepared to drop the question mark.³ This must surely be justified: the combination of the mint reading HIR with the moneyer Abenel can hardly point to any other mint than Hertford.

On the coinage of Edgar (King of Mercia 957, King of All England 959–75) the name of Abenel is found on a unique coin of Hertford, of the crowned bust type (*BMC* v, North 751). The mint name in this case reads HIRT. This moneyer's name is not recorded on any other coin of Edgar's and in view of the fresh names which now appear, it would seem that Abenel's term of office, which may have lasted something like 30 years, finally came to an end.

In the 1894 Douglas hoard was a Hertford penny of Edgar of the crowned bust type but varying from the norm in having the bust contained in the inner circle (*BMC* —, North 751/1). The variant was noted by Grueber in the text of his report on the hoard,⁴ but was in some measure obscured by the references he cites, both of which are to coins of the normal crowned bust type. It was left to Mr. Dolley and Dr. Metcalf to bring the variety fully to notice and to illustrate it.⁵ The mint name is clearly HIRTFOR preceded by

¹ Whitelock, *op. cit.*, p. 62.

² *NC* 1925, p. 364.

³ *Anglo-Saxon Coins*, ed. R. H. M. Dolley, p. 160

⁴ *Op. cit.*, p. 62.

⁵ *NC* 1913, p. 9, no. 27. and pl. XIV, 11.

MO]NETA. The coin is a large fragment and the first two letters of *Moneta* are missing as are the last one, two, or possibly three letters of the moneyer's name which begins HA. Grueber completes it as Hanna (for Manna) and it is likely that something of this kind is reasonable and in particular that the initial H can be interpreted as M. No comparable name is found on other coins that might be associated, though Manne is recorded on a crowned bust coin without mint-name but probably of East Anglian origin.¹

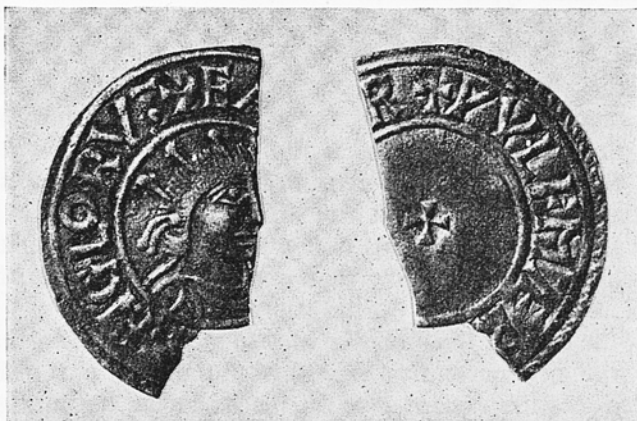


FIG. 1 (enlarged).

Until recently the only other specimen of this variety was thought to be in the Hunterian Museum, Glasgow, from the Coats collection, a coin of the moneyer Byrnferth without mint-signature,² but recently a third has turned up (possibly none the less from an old find³) which, interestingly, may, like the Douglas specimen, be attributed to Hertford. Again it is a fragment but in this case the moneyer's name, Wulfmær, appears in full and it is the mint name that has suffered to the extent of losing all but the final letter R. The coin may, however, confidently be accepted as of Hertford. The only other occurrence of the name Wulfmær on a mint-signed coin in this reign is on one of Hertford of the diademed bust type (*BMC* vi, North 752). The name does, however, occur on a single coin of the crowned bust type, without mint signature⁴ but with an extra cross in the reverse field. This too may well be a Hertford coin.

This variant of the crowned bust type deserves some attention. It has several curious features: the King's title is REX ANGLORV(M), a common enough reading on his cross type (*BMC* iii, North 749) but not found on the normal crowned bust coins which end REX. As is the case in the somewhat comparable issue of Athelstan (*BMC* ix, North 675) it is the extra space resulting from the bust not breaking the inner circle that makes the longer reading possible. The letter G, which occurs twice in the obverse legend, is of the rounded form as opposed to the square form which otherwise seems invariable on Edgar's coinage. It has been noted that two of the three surviving specimens of this type are from

¹ Chester (1950) hoard, *BNJ* xxvii (1954), p. 159, no. 507.

² *SCBI* Glasgow, 711.

³ The coin was acquired from the old-established firm of A. H. Baldwin & Sons Ltd. It came to light in

the course of their move to new premises and had clearly been in their possession a number of years. It corresponds to one recorded in the Huxtable sale of 1859.

⁴ Chester (1950) hoard, op. cit., p. 159, no. 510.

the Hertford mint and that the third, by Byrnferth, has no mint signature. This moneyer is found on a Bath coin of Edgar's cross type.¹ He also issued one of those rare variants of the two-line type that have a cross above and below the moneyer's name as opposed to the more usual trefoil of pellets (*BMC* ib, North 743), a type that is essentially southern in style.² But what is most significant is that he struck a coin of the crowned bust type, without mint signature,³ on which the bust is very similar in style to the coins of Wulfmær of the same type, referred to above. Whether or not they are from the same mint must be doubtful, but both are clearly from the same die-cutting centre, presumably London.

The position of this variant in Edgar's coinage is an interesting question. One would like to see it as an experimental issue of the crowned bust type, abandoned shortly after its introduction perhaps because the King's bust was too crowded when placed entirely within the inner circle. But, since Abenel struck the normal crowned bust type, this would involve Hertford having had two, if not three, moneyers, operating at the same time—Abenel, Ma-, and Wulfmær. Up to this time everything suggests that Hertford was a one-moneyer mint and, indeed, no more than one name, Wulfmær, is found on the last type of Edgar and in the coinage of Edward the Martyr.

The existence of the coin by the moneyer Ma- suggests, however, that two moneyers must have been working concurrently at Hertford in the latter part of Edgar's reign, no matter where one places the variant issue: if placed at the beginning of the series, it means that he, Abenel, and Wulfmær were operating together; if at the end that he and Wulfmær were, for Wulfmær struck a coin of the normal crowned bust type (which on this assumption preceded the variant) and he goes on into the next reign.

Metcalf and Dolley argued that the use of the title *Rex Anglorum* pointed to the variants being a transitional issue prior to the reform that they date to 973.⁴ The reform type coins bear the title *Rex Anglor*. But this argument in itself is insufficient, since, as has been pointed out, the full *Rex Anglorum* title is commonplace in Edgar's southern issues of the earlier cross type.

That the number of moneyers at the Hertford mint had increased beyond one in Æthelred II's reign is clearly demonstrated by ten coins listed in Hildebrand's *Catalogue* of the Stockholm collection where at least six names are given in his *Crux* type. This is not evidence that the number was necessarily increased earlier, but may be significant.

There is a very comparable type with a corresponding variant in the reign of Athelstan (*BMC* viii and ix). Here the evidence of the moneyer's name fails to support the idea of an early experimental issue.

On balance it seems best to accept that in both cases the variant occurred late in the type. This would have the advantage in the case of the Edgar coins of reducing from three to two the number of moneyers operating at the same time at Hertford, a figure that would seem more acceptable.

Wulfmær continues at Hertford in Edgar's last type and in the reign of Edward the Martyr, though in each case only a single surviving specimen appears to be recorded.

With the last (Reform) type of Edgar the name of Maldon as a mint reappears on the coins. Only two specimens are recorded, both by a moneyer Byrhtefrd (= Byrhtferth), a name that does not appear again on Maldon coins.

¹ BM, presented by L. A. Lawrence, 1927.

² BM ex Chester (1950) hoard, no. 384 (ill.).

³ BM ex Chester (1950) hoard, no. 503 (ill.).

⁴ *Anglo-Saxon Coins*, p. 160.

Until recently there appeared to be a gap in the Hertford coinage at the beginning of Æthelred II's reign: the earliest known type was CRVX. Miss van der Meer has, however, now discovered and published a coin in the Berlin cabinet of the First hand type by the same moneyer, Wulfmær.¹ Mr. Dolley has reviewed the Hertford coinage of this reign and his paper² provides the logical continuation to this note on the origins of the mint. It would be useful if a corresponding note on the later history of the Maldon mint could be written, not least because of the confusion that in the past has arisen with the coins of Malmesbury.

There is appended to this short note a corpus of the coins which may reasonably be attributed to the mints of Hertford and Maldon from the time of Athelstan to the reign of Edward the Martyr.

I am indebted to Professor Whitelock, Miss Archibald, Mr. Dolley, Mr. Doubleday, and Mr. Elmore Jones for advice and help on various points that have arisen in preparing this note and this I gratefully acknowledge.

CORPUS OF COINS ATTRIBUTABLE TO THE HERTFORD AND MALDON MINTS, ATHELSTAN TO EDWARD THE MARTYR

HERTFORD

ATHELSTAN (924–39)

With mint-name

BMC i/v mule (North —).

1. Abonel. XABONEL MONTO HIORTFD. Forum hoard 211.

BMC viii (North 673).

2. Abonel

(a) ABONEL MO HIORT three pellets in field. 22.5 gr. *SCBI* Copenhagen 694.

(b) Same reverse and probably same obverse die. Forum hoard 211.

(c) Probably same obverse die; reverse differs but generally similar. 21.4 gr. Berlin.

Without mint-name

BMC i (North 668).

3. Abonel

(a) ABOH /EL MÔ No mark top or bottom of reverse. Large lettering. 19.9 gr. *SCBI* Edinburgh 118.

(b) ABO/NEL Trefoil of pellets top and bottom. Large lettering. 23.6 gr. Berlin.

(c) ABO/NEL Trefoil of pellets top and bottom. Large lettering. Forum hoard 85.

All three are from different dies. These may be of Maldon.

EDMUND (939–46)

Without mint-name

BMC i (North 688).

4. Abunel. *SCBI* Edinburgh 200 ex Iona hoard. 22.1 gr. (chipped).

5. Abenel (a) Forum hoard 286.

(b) K. A. Jacobs.

These may be of Maldon.

¹ *Dona Numismatica* (Walter Hävernack), Hamburg, 1965, pp. 68–9.

² *BNJ* xxix (1958–9), pp. 54–8.

EADRED (946–55)

None recorded.

EADWIG (955–9)

*With mint-name**BMC* ii (North 727).

6. Abenel. Mint reading HIR. Extra cross in obverse field. 20·7 gr. BMA 563.

EDGAR (King of Mercia 957, of All England 959–75)

*With mint-name**BMC* v (North 751).

7. Abenel. MON HIRT. 22·8 gr. BM ex Chester hoard 493 (ill.).

BMC v (Var. with bust contained in inner circle; round g) (North 751/1).

8. Ha— (= ? Manna). HIRTFOR. BM ex Douglas hoard, 27. Ill. *Anglo Saxon Coins*, pl. XIV, 11. Large fragment.
9. Wulfmær. Mint —R. Blunt = ? Huxtable sale (1859) 601. Large fragment. (Text block).

BMC vi (North 752).

10. Wulfmær. HEORT. Ready sale (1920) 107 (not ill.); later Glendining 17 July 1957, 219 (not ill. but seen by Mr. Dolley, *BNJ* xxix, p. 57).

*Without mint-name**BMC* v (North 750).

11. Wulfmær. Extra cross in reverse field. 23·0 gr. BM ex Chester hoard 510 (ill.).

EDWARD THE MARTYR (975–8)

BMC i (North 763).

12. Wulfmær. HERT. 20·6 gr. *BMC* 10 (not ill.).

MALDON

(All with mint-name)

ATHELSTAN (924–39)

BMC viii (North 673).

1. Abonel. +ABONEL MAEL-D. Trefoil of pellets before initial letter. Obverse die very similar to Hertford no. 2. Forum hoard 245.

EDGAR (King of Mercia 957, of All England 959–75)

BMC vi (North 752).

2. Byrhtefrd (a) Oslo. From the Fiskå farm hoard in the parish of Vanylven in Møre and Romsdal county. *NNÅ* 1952 (not ill.).
- (b) MÆL. Stockholm, Hild. 29 (there attributed to Malmesbury).

A FURTHER FIND OF COINS FROM DUNWICH

ROBERT SEAMAN

MR. Edward R. H. Hancox, writing in the *British Numismatic Journal* in 1908,¹ described a number of English and Scottish hammered coins examined by him and which were found at Dunwich. The majority of the pieces were cut halves and quarters and were issued over a period of some 300 years. Mr. Hancox stated that he had seen other coins said to have been found at Dunwich and that these ranged from Anglo-Saxon to issues of the seventeenth century. The paper contains a brief but entirely sufficient history of the town of Dunwich and there is, therefore, no need to enlarge on this in the present report.

The writer of this paper has had the opportunity, through the kind offices of the Trustees of Dunwich Museum, to examine another parcel of coins of the same period as those reported upon by Mr. Hancox and also comprising almost entirely cut pieces. The two collections are so similar as to suggest that the second lot of coins are, in fact, the hundred or so others referred to by Mr. Hancox, but which he was not able to study in detail. The following table describes briefly the coins in the 1908 report and those now being published:

Type	No. in 1908 report	New listing
William I	2	..
Henry I	3	1
Stephen	3	..
Henry II—'Tealby'	11	1
'Henry'—Short Cross	85	60
Long Cross	79	51
Edward I	16	2
Edward II	2	..
Edward III	3	..
Richard II	1	..
Edward IV (?)	2	..
Scottish—William the Lion	6	5
Alexander	4	2
Uncertain—Henry	2	..
Edward	4	1
Others	..	5
Forgery (Long Cross)	..	1
Totals	<u>223</u>	<u>129</u>

The denominations contained in the two parcels are:

	1908	Present
Pennies	23 (1 broken)	2 (both broken)
Round halfpennies	9 (2 broken)	..
Round farthings	10 (1 broken)	2 (1 broken)
Cut halfpennies	76	67
Cut farthings	105	58
Totals	<u>223</u>	<u>129</u>

¹ *BNJ* v (1908), pp. 123-34 + plate.

It can be seen from the tables that the two parcels of coins have many similar features. The 1908 coins include a larger proportion of issues prior to Short Cross, but a number of the earlier coins were added to those from the main source. Those added were obtained from various local people and were stated to have been found in the town. They are one of the William I coins, of type IV and the earliest piece listed, and all coins bearing the names of Henry I and Stephen. The rest of the coins were already together when Mr. Hancox received them. It is interesting to compare this situation with the circumstances surrounding the new parcel. The writer, in fact, received eighty-five coins initially and some time later was given a further forty-four pieces which had come from the same source. The second instalment contained a few Short Cross, but mainly consisted of Long Cross plus three of the Scottish pieces and an Edward cut farthing. Thus the earlier coins were contained in the first group of coins.

The oldest coin listed in 1908 was issued c. 1077 and the latest of those positively identified could not have been emitted before 1377. If, in fact, the specimens attributed tentatively to the reign of Edward IV were correctly identified, then the latter date must be advanced to at least 1461. The earliest coin included in the parcel now being published is of Henry I, type II and was issued c. 1103, whilst the latest piece may be dated about 1278. So at first sight the 1908 coins span over 300 years and possibly 384 years, whereas the present coins cover approximately half that period, neatly fitting into the middle years of the first parcel.

Mr. Hancox made a point of mentioning that the later coins of those he examined were very worn but that the majority were in reasonable condition. In the present more homogeneous parcel all the pieces are in about the same state, save that one or two are particularly well preserved. The general state is only average and it is likely that the coins were subject to salt water at some time. Although there are no worn pieces in this later parcel, the items in it have a terminal date 100/180 years earlier and it contains no coins of the issues found in this state in the 1908 find.

The question that must now be considered is what caused a large number of fragments to be deposited almost without any whole pieces. The origin might be:

- (a) a money changer's office
- (b) a local tax office
- (c) a private hoard
- (d) a religious institution.

From time to time the existence of a mint at Dunwich has been suggested but the writer can trace no coins which can be assigned to this mint.¹ It would appear that the several references emanate in the main from Hildebrand, who assigned to Dunwich an Æthelred II penny reading EADZI MO DVNII and a Cnut penny reading LEOFRIC M DVM.² These coins have since been transferred to the mints of London and Huntingdon or Buckingham respectively.³ Therefore, the presence of a money changer's office is not likely.

It is difficult to understand why a private individual should store away cut and broken

¹ e.g. H. A. Parsons, 'The Dunwich Mint', *BNJ* ix (1912), pp. 119 *et seq.*

² B. E. Hildebrand, *Anglosachsiska Mynt*, 1881, p. 51, no. 440 and p. 215, no. 361.

³ G. van der Meer, 'Some corrections to and Com-

ments on B. E. Hildebrand's Catalogue of the Anglo-Saxon Coins in the Swedish Royal Cabinet', in *Anglo-Saxon Coins*, ed. Dolley, 1961, pp. 169-87. The Cnut coin is most probably of the Buckingham mint, cf. *BNJ* xxxiv (1965), p. 50.

coins with dates varying over hundreds of years. It is also not easy to envisage a local tax office accepting such items, certainly after the first few, if it became obvious that the money could not be passed on. Even if this were the case, presumably a government office would be in a position to have the coins melted down so that at least the intrinsic value could be obtained.

In the absence of a better suggestion, we are left with the possibility that the Dunwich coins are from a religious house. This view was expressed by Mr. Hancox in his 1908 paper and, despite considerable thought given to the matter, the present writer is unable to suggest a more easily acceptable solution. The view of Mr. Hancox was that these little pieces were placed in the offering box of one of the local monasteries and he names Grey Friars as being a likely place. If this assumption is correct then, in the absence of similar finds from other areas, it seems that the people of Dunwich were singularly mean towards the local religious orders and placed coins in the offering box which were not legal tender. The only full pennies in the find are Scottish and presumably they would not be readily accepted by the local business community. Alternatively, perhaps, the pennies were too light. The weights of the 1908 coins are not given in the report but the two pennies in the present parcel are both broken.

But if that is, in fact, the real cause of the gathering together of such an unusual collection of pennies and fractions, and we are unlikely ever to be certain, there remains the question why the religious house did not dispose of the coins in order to obtain the metallic value. The total face value of the coins in the two parcels is over twelve shillings, a not inconsiderable sum, and one would expect an institution such as Grey Friars to have had the connections for selling the silver.

Looking at the contents of the later parcel it would be reasonable to accept this as a hoard of Short Cross/Long Cross fractions, to which have been added a small number of other cut pieces. The explanation for the different composition of the parcel listed by Mr. Hancox is doubtless to be found in the fact that the Norman coins which he obtained from local inhabitants and added to the list were not in fact from the same find; there is no reason to exclude the possibility that the later pieces in the 1908 list were also additions from another source—their differing condition suggests this—thus making both parcels basically parts of one Short Cross/Long Cross hoard. The curious aspect is that the additions, with issue dates ranging over several hundred years, are, like the main content, all cut or broken. It is fortunate that this most interesting accumulation has been preserved and it may well be that other similar collections will be unearthed in future.

The following is a complete list of the coins handed to me:¹

LIST OF COINS

ENGLAND

<i>Denomination/type</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Weight/gr.</i>
HENRY I			
Class II			
Cut $\frac{1}{4}$	EN	ON (L?)	3.2 [Pl. II, 12]

¹ I wish to place on record my thanks for the help I have received from Mrs. Clarke of Colchester, who brought the coins to my notice. Also to the Depart-

ment of Coins and Medals at the British Museum for making available photographic equipment to enable the whole find to be recorded on film.

<i>Denomination/type</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Weight/gr.</i>
HENRY II, ETC.			
'Tealby' Issue			
Cut $\frac{1}{2}$	Illegible	Illegible	7.7
Short Cross			
Class 7			
Cut $\frac{1}{2}$	Illegible	ON A	9.2
Unclassified			
<i>Canterbury</i>			
Cut $\frac{1}{2}$	Illegible	+ ANTE	9.1 [Pl. II, 13]
	ENRICVS	AN:ON:C	8.8
	Illegible	ANTE	8.3
<i>London</i>			
Cut $\frac{1}{2}$	hE EX	LV ND	11.7
	h REX	ABEL:ON	10.6
	CVS RE	ON:LVN	10.2
	ENRICVS	LVNDEN	9.4 [Pl. II, 14]
	VS REX	+RI ND	9.2
	Illegible	ED (?) ND	7.8
	CVS	:ON:L	7.7
Cut $\frac{1}{4}$	Illegible	+ NDE	5.6
Cut $\frac{1}{2}$	+h EX	ON:LVND	5.2
Cut $\frac{1}{4}$	hENR	LVN	5.2
	+h X	+ VN	5.1
	Illegible	N:LV	4.1
<i>Norwich</i>			
Cut $\frac{1}{4}$	Illegible	NOR	3.8
<i>Uncertain</i>			
Cut $\frac{1}{2}$	hEN	Illegible	13.6
	Illegible	do.	11.5
	do.	do.	11.1
	h EX	WALTE	10.8
	ENRICVS	INC	10.1
	hENR EX	RODBER	9.8
	Illegible	Illegible	9.8
	hENRIC	+IO NIC	9.6
	NRICVS	Illegible	9.5
	Illegible	do.	9.4
	RICVS R	EME (?)	9.1
	S RE	RICAR	9.1
	RICVS R	RIC NDV (?)	8.9
	ENRI	LGE (?)	8.8
	S REX	+TV ER	8.5
	EN	DO	8.5
	Illegible	NICOL	8.5
	hEN	RE	8.3
	hEN (?)	ON:NO (?)	7.8
	Illegible	Illegible	7.4
	+h EX	do.	6.1

<i>Denomination/type</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Weight/gr.</i>
Cut $\frac{1}{4}$	Illegible	Illegible	5.5
	ICV	LE	5.5
	hEN (?)	LE	5.4
	Illegible	ON.W	5.2
	he	X WIL	5.1
	Illegible	Illegible	5.1
Cut $\frac{1}{2}$	do.	do.	5.0
Cut $\frac{1}{4}$	VS R	HV	4.9
	Illegible	LVN (?)	4.8
	do.	Illegible	4.8
	RIC	CA (?)	4.6
	Illegible	ERE (?)	4.6
	do.	ERI (?)	4.3
	EX	Illegible	4.1
	Illegible	do.	4.1
	do.	do.	4.0
	do.	D	3.8
	do.	EN	3.8
	do.	Illegible	3.8
	do.	do.	3.7
	do.	DE	3.5
	do.	Illegible	2.9

HENRY III

Long Cross

Class III

Cut $\frac{1}{2}$ Cut $\frac{1}{4}$

Illegible	henri.O	10.1
CVS	ON:L	5.6
X II	.L	4.6
EX II	OLE	4.4

Class IIIa

Cut $\frac{1}{2}$

VS REX III	he O	9.7
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Class IIIb

London

Cut $\frac{1}{2}$

+h	REX III	N LVNDE	10.9	[Pl. II, 15]
+HEN	EX III	NDE	10.1	
VS REX		LVN	9.4	

Uncertain

Cut $\frac{1}{2}$

S REX III	OLE ON L	9.7
VS REX	NIC	8.7
hen	NIC	6.4
Illegible	ION	6.2

Class IIIc

London

Broken 1d

Cut $\frac{1}{2}$

henr	X III	ON LVNDE	15.4	[Pl. II, 16]
henric		NDE	10.6	

Uncertain

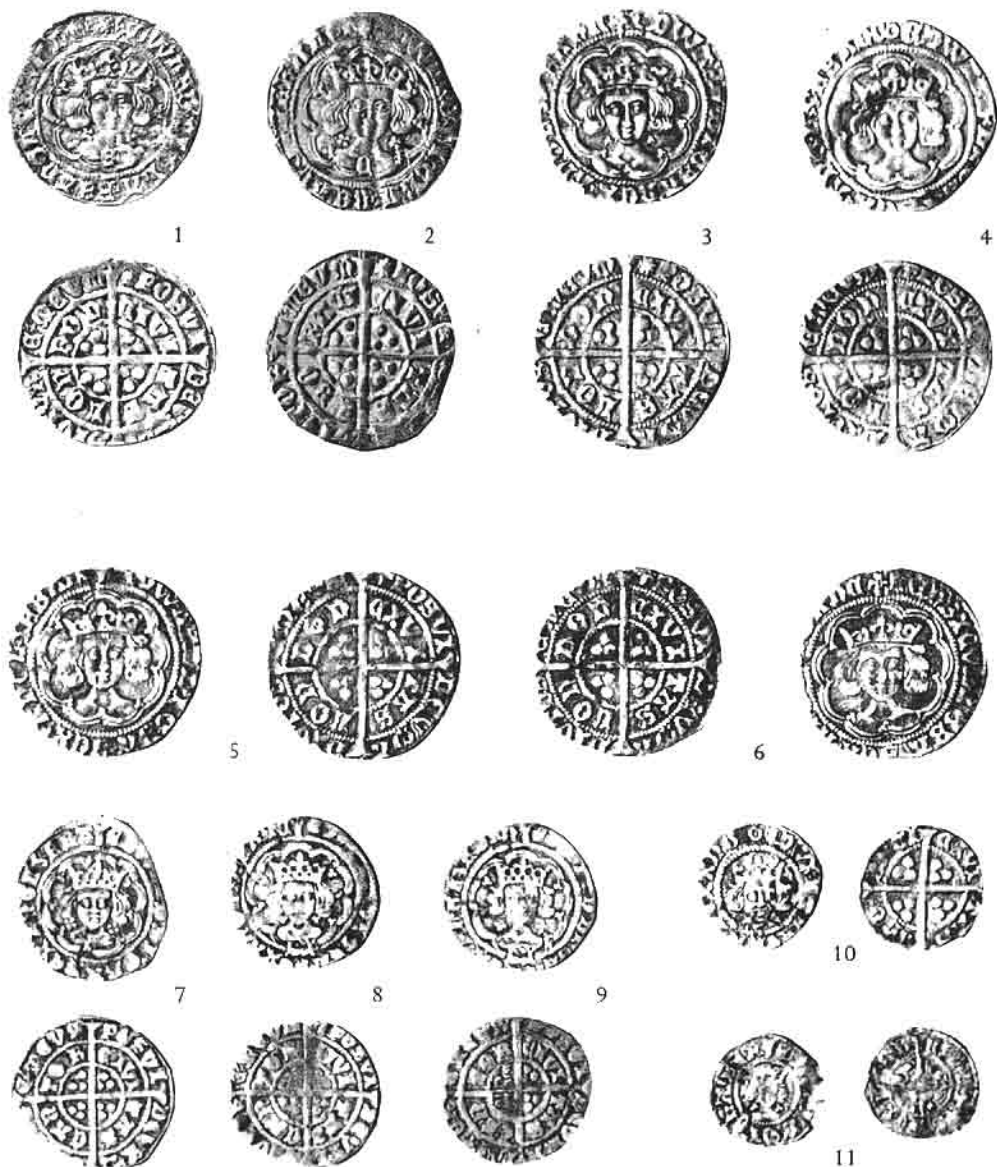
Cut $\frac{1}{2}$

+he	III	OLE ON	8.5
	III	Illegible	8.1
E		RIC	4.2
Illegible		OLE	4.0

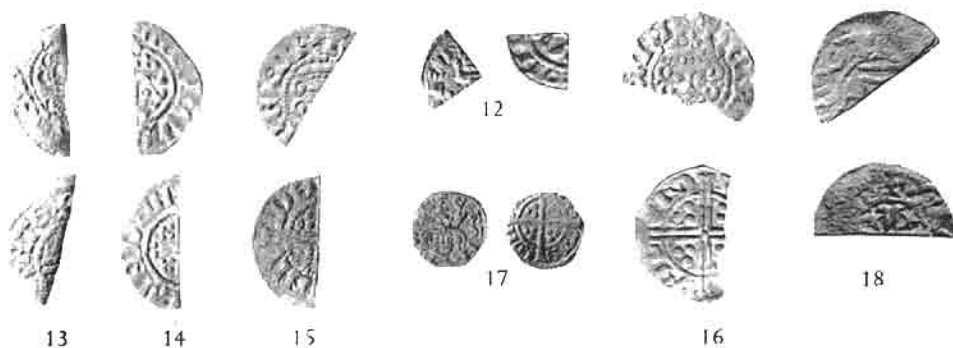
<i>Denomination/type</i>	<i>Obverse</i>		<i>Reverse</i>		<i>Weight/gr.</i>
<i>Class V</i>					
<i>London</i>					
Cut $\frac{1}{2}$	VS	III	RI	ND	10.8
<i>Uncertain</i>					
Cut $\frac{1}{2}$	ICVS RE		RIC (?)		10.1
Cut $\frac{1}{4}$	EN		NC		4.5
Cut $\frac{1}{2}$	Illegible		Illegible		4.3
<i>Class Va or Vb</i>					
<i>London</i>					
Cut $\frac{1}{2}$	he	X III		N LVNDE	11.2
<i>Uncertain</i>					
Cut $\frac{1}{2}$		III	GILBE		8.1
<i>Class Vg (?)</i>					
<i>Uncertain</i>					
Cut $\frac{1}{2}$	hENR	III	TERI ON		10.9
<i>Unclassified</i>					
<i>Canterbury</i>					
Cut $\frac{1}{2}$	ENRICVS		OLE ON C		8.2
<i>Uncertain</i>					
Cut $\frac{1}{2}$	Illegible		O		9.7
	ICVS REX		OLE ON		8.6
	+ h	III	ON		8.5
	Illegible		Illegible		8.3
	hEN		NICOLE		7.5
	Illegible		Illegible		6.3
Cut $\frac{1}{4}$		EX I	do.		6.3
	CVS R		OLE		6.0
	CVS		N		5.9
	Illegible		Illegible		5.8
	do.		ON		5.7
	do.		RIC		5.5
	do.		ON		5.4
	do.		Illegible		5.1
	do.		do.		4.4
	do.		do.		4.4
	do.		+ T		4.4
	h	II	LE		4.3
		S	ON		4.0
	Illegible			D	3.7
	VS		EM		3.6
		REX		NC	3.5
	Illegible		ON		3.5
	do.		Illegible		3.1
	RIC			NC (?)	2.8
<i>Unidentified Long or Short Cross</i>					
<i>Broken 1d</i>					9.5
Cut $\frac{1}{2}$	Illegible		Illegible		8.9
Cut $\frac{1}{4}$					6.1
Cut $\frac{1}{2}$					6.0
Cut $\frac{1}{4}$					5.8

<i>Denomination/type</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Weight/gr.</i>	
Long Cross forgery				
Cut $\frac{1}{2}$	Illegible	IC	6.6	
EDWARD I				
<i>London</i>				
Round $\frac{1}{4}d$	ER ANG	CIVITAS LONDON	5.8	
Round $\frac{1}{4}d$, broken	Illegible	CIVI	5.1	
UNIDENTIFIED 'EDWARD'				
Cut $\frac{1}{2}$, broken	hyB	CIVI	5.9	
SCOTLAND				
WILLIAM THE LION				
Cut $\frac{1}{2}$	} Illegible	+	(Henri le Rus)	9.1
Cut $\frac{1}{2}$		v	(Henri le Rus)	8.5
Cut $\frac{1}{2}$		WAL	(Hue Walter)	8.4
Cut $\frac{1}{4}$		Illegible		4.2
Cut $\frac{1}{4}$		E W	(Hue Walter)	4.1
ALEXANDER III				
Cut $\frac{1}{2}$	Illegible	Illegible	11.1	
	do.	do.	7.2	

[Pl. II, 18]



DELMÉ - RADCLIFFE : EDWARD IV



DUNWICH HOARD

MONETARY POLICIES IN ENGLAND, 1272-1307

MAVIS MATE

I. INTRODUCTION

HISTORIANS have paid little attention to monetary problems, despite their importance.¹ This has weakened our understanding of European history, for three major monetary problems faced western rulers in thirteenth-century Europe, and the measures they devised to solve them affected the economies not only of their own countries but of all Europe. By far the most pressing problem of the three was the small number of coins in circulation, which was quite inadequate to serve the needs of an expanding economy and an increasing population. That problem was aggravated by the shipment of silver to the Near East and to North Africa, leading to a shortage of silver which became acute by the end of the century. Finally, princes were often frustrated in their efforts to introduce monetary reforms by a proliferation of minting rights which prevented adequate royal control, and by the desire of clippers and counterfeiters to profit from the coinage.

The Italians had led the revival of trade and industry, and they were the first to introduce remedies, not always satisfactory, for the inadequate coin supply. In the hope of making existing supplies of silver go further, they debased the coinage by increasing the proportion of alloy in each coin. This certainly increased the number of coins in circulation, but, with the depreciation of the currency, prices began to rise, until by the end of the twelfth century large quantities of coin were needed to conduct the simplest transaction. In response, many Italian cities began to issue larger silver pieces, known as *grossi* or groats. The first appeared in 1172 when Genoa issued a silver coin worth four pennies, but this proved too small, and in 1202 Venice issued its own *grosso*, the matapan, worth twenty-four pennies. These examples were soon followed and Verona in 1203 and Florence in 1237 both issued *grossi* worth twelve pennies each. The new *grossi* were of finer silver than the old pennies and were generally referred to as 'white money' to distinguish them from the black debased pennies which were still used for local transactions, but were becoming unsuitable for large-scale payments.²

Unfortunately neither the debasement of the coinage nor the minting of the groat was able to solve permanently the problem of an inadequate currency in an expanding commerce. Since the break-up of the Carolingian Empire, silver had been the only metal minted in Europe in any quantity, but its supply had not kept pace with the increasing demand for money. The burden had been eased slightly with the development of credit and the circulation of Byzantine and Islamic gold coins, but by 1250 these coins had

¹ In this article the following abbreviations have been used for records in the Public Record Office, London. C. 47 Chancery, Miscellanea; C. 66 Chancery, Patent Rolls; E. 101 Exchequer, King's Remembrancer, Accounts Various; E. 159 Exchequer, King's Remembrancer, Memoranda Rolls; E. 372 Exchequer, Lord Treasurer's Remembrancer, Pipe Rolls; E. 368 Exchequer, Lord Treasurer's Remembrancer, Memoranda Rolls; E. 401 Exchequer, Lord Treasurer's Remembrancer, Receipt Rolls; K.B. 27 King's Bench,

Coram Rege Rolls; S.C. 1 Special Collections, Ancient Correspondence; S.C. 8 Special Collections, Ancient Petitions.

² Marc Bloch, 'Esquisse d'une histoire monétaire de l'Europe', *Cahiers des Annales*, ix (Paris, 1954), pp. 35-44; P. Spufford, 'Coinage and Currency', *Cambridge Economic History of Europe*, iii (Cambridge, 1963), pp. 586-9; Allan Evans, 'Some Coinage Systems of the Fourteenth Century', *Journal of Economic and Business History*, iii (1930-1).

deteriorated in weight and were no longer acceptable as international currency. Clearly some additional currency was necessary and the answer which seemed obvious to the Italian cities was a return to the minting of gold pieces. Once again the Genoese took the lead and, with the aim of fostering their trade with Sicily and Syria, issued their first gold coin, the *genovino*, in 1257. Later the same year the Florentines followed their example, striking a gold florin that was worth twenty groats (240 *deniers*). Much later, in 1284, the Venetians issued a gold coin, the ducat, of the same weight as the *genovino* and the florin.¹

The introduction of gold coins eased the currency shortage, but made silver even scarcer, since much of the gold was paid for by the export of silver. Towards the end of the twelfth century the Muslim world, which had been issuing nothing but gold pieces, began to strike silver coins again. The Islamic mints, both in the Near East and in North Africa, obtained their silver from Europe and paid for it in gold. Further, in the beginning of the thirteenth century rulers in southern Europe began to manufacture counterfeit Muslim coins destined for North Africa. Most of these coins were also paid for in gold. It was probably this African gold which enabled Genoa to issue her gold coins so early. But, as the trade in counterfeit coins, the *millarès*, expanded, large quantities of silver escaped from Europe never to return. The trade was secret, so there are no exact figures, but one scholar has estimated that more than 3 billion coins containing about 4,000 metric tons of silver were exported during the thirteenth century. As a result, Europe by the end of the century was faced with an acute shortage of silver.²

Rulers in northern Europe, faced with the same problems as the Italians, arrived at similar solutions. In 1266 St. Louis of France issued a groat (the *gros tournois*) worth twelve *deniers*. It was immediately successful and from France the minting of large silver pieces eventually spread to Aragon, Castile, the Low Countries, and the empire. He also tried minting gold pieces, which failed miserably just as had an earlier attempt by Henry III of England. In 1257 Henry had issued a gold penny worth twenty silver pennies. It was struck for three years but disappeared almost as soon as it issued from the mint, because it was undervalued in relation to silver, so that bullion dealers found it profitable to melt it down. In neither France nor England was there a real need for a coin of such a high denomination, for the business needs of the country were not sufficient to sustain it, and, as the people of London complained, few men had chattels worth even one golden penny.³ When the merchants did need a larger coin, they used the florins of Florence, which circulated freely in northern Europe.

St. Louis's monetary reforms had been checked by the existence of private minting franchises. Although his predecessors had closed down as many feudal mints as they could, a large number of counts, monasteries, and bishops still possessed the right to issue their own coins and were unwilling to follow the royal lead. In 1262, therefore, St. Louis insisted that the money of the feudal barons was to be accepted only in their own lands whereas the royal *deniers* had to be accepted throughout the whole kingdom. In

¹ R. S. Lopez, 'Back to Gold, 1252', *Economic History Review*, 2nd ser. ix (1956), pp. 218-40; Spufford, *Camb. Ec. Hist.*, pp. 589-91.

² These ideas were first put forward by R. H. Bautier, 'L'or et l'argent en occident de la fin du XIII^e siècle au début du XIV^e siècle', *Académie des inscriptions et belles-lettres, comptes rendus* (1951), but they have

been more fully developed by A. M. Watson, 'Back to Gold—and Silver', *Economic History Review*, 2nd ser. xx (1967).

³ Sir Charles Oman, *The Coinage of England* (Oxford, 1931), p. 51; Sir Maurice Powicke, *King Henry III and the Lord Edward* (Oxford, 1947), p. 317.

addition non-royal minters were forbidden to imitate royal money or to mint new kinds of coins.¹ He could not prohibit the use of seigneurial coins, as there was not enough royal money to meet the needs of the people. He did, however, try to limit the circulation of feudal money and to encourage that of his own. In this he was successful.² He also succeeded in checking the manufacture of the *millarès*, but he could not prevent the outflow of silver, which continued to be exported from the southern coast of France and particularly from Montpellier, leaving France with a silver crisis by the early fourteenth century.

While the French kings were building up a national currency to help bind their country together as it developed into a centralized, territorial state, the petty princes in the rest of Europe, as they escaped from centralized control, jealously guarded their right of mintage, leading to a tremendous fragmentation and diversity of coinages. In the empire, for example, as the imperial authority declined, the coinage fell almost entirely into seigneurial hands. The same was largely true of the Low Countries and, of course, in Italy each city state issued its own money. With no centralized control, each ruler was free to debase his coinage as much as he wished. Most of them did so, either by reducing the weight or increasing the amount of alloy in the coins, so that by the end of the thirteenth century the currency throughout the greater part of Europe had depreciated badly. England was the one exception.

English kings steadfastly resisted the influence of the Continent and determined to maintain the stability of their currency. It was not an easy task, but they succeeded because they exercised greater control over their coinage than most of the continental rulers. Their greatest problem was the deterioration of coins with age or clipping. Coins were made without a raised rim or clear-cut edge and striking was often carelessly done, so that if the blank was not perfectly centred on the die, part of the design ran over the rim and the rest of the coin remained empty. It was easy to remove slivers of metal from the edges of such coins and clipping of the coinage was a common offence.³ The design of the short-cross on the reverse of the coins also encouraged clipping, for it was too small, so that silver could be snipped from the edges without attracting attention. In addition, the coins slowly lost metal by wear, so that after twenty-five to thirty years they were no longer of the standard weight. Consequently English kings needed to call in defective coins three or four times a century and replace them with new coins of full weight. Thus there was a recoinage under Henry II in 1180, under John in 1205, and under Henry III in 1247. Each one was accompanied by measures, not always successful, against clippers and counterfeiters. Henry III, for example, altered the design on the reverse of the coins to a long cross extending to the very edge of the coin in the hope that clipping would be easier to detect.⁴

Why did the English kings take so much trouble to maintain the stability of their

¹ Spufford, *Camb. Ec. Hist.*, p. 584; Bloch, *Esquisse*, p. 35.

² In Languedoc, for example, the coinage was almost entirely in feudal hands at the beginning of his reign, but by 1270, several seigneurial mints had been closed down and royal coins were circulating freely. Thomas N. Bisson, 'Coinages and Royal Monetary Policy in Languedoc during the Reign of St. Louis', *Speculum*, xxxii (1957).

³ Sir John Craig, *The Mint, A History of the London*

Mint from A.D. 287 to 1948 (Cambridge, 1953), pp. xv, xvi, 27.

⁴ Full details about the early history of the English coinage can be found in Brooke, *English Coins* (London, 1932); Charles Johnson, ed., *Nicholas Oresme, De Moneta* (London, Nelson, 1956), Introduction; J. J. North, *English Hammered Coinage*, 2 vols. (London, 1963); Sir Charles Oman, *The Coinage of England* (Oxford, 1931).

coinage when currencies in the rest of Europe were depreciating so rapidly? Several reasons are put forward by Professor Cipolla in his excellent article on currency depreciation in the Middle Ages.¹ He points out that the demand for money in England up to the middle of the thirteenth century was much less than in Italy, because its economic growth had been slower. In addition England had the advantage of a surplus of raw wool, which was much in demand, so that she enjoyed a favourable balance of payments. Finally the English kings had to consider the interests of the landed classes who objected to inflation, whereas the Italian cities were ruled in the interests of merchants, who profited by it.² These reasons, although valid, do not, however, explain why the currency of France, whose economy did not differ so radically from that of England, was not stable, like the English one, but depreciated almost as badly as that of the Italian cities.

It therefore seemed worth while to undertake a detailed analysis of how and why this stability was maintained under Edward I. Although in many instances he was only carrying out the policies of his predecessors, his reign was chosen for this study because it was at this time that the documents became more plentiful. The Lord Treasurer's Remembrancer's Memoranda Rolls and the King's Remembrancer's Memoranda Rolls, for example, which in the 1270s contained only twenty membranes, had expanded to eighty membranes by the 1290s and over 100 membranes by 1307. The Pipe Roll accounts of the Wardens of the Mint also became much fuller and the Exchequer Various Accounts for the Mint effectively begin with Edward I, as only seven have survived from the period before. No one has yet made extensive use of these documents, although much work has been done in the field of pure numismatics.

Not only are more documents available for Edward I; they are more communicative on money matters. Edward I's reign is a particularly significant one in the monetary history of England. In 1279 he undertook a major recoinage, introducing a new coin, the groat, and round farthings, and halfpennies as well as carrying out several important administrative reforms.³ In addition he passed many acts and ordinances trying to prevent the clipping of the coin and the importation of bad money. Because historians have not made extensive use of unpublished material, no one knows how successful these monetary measures were and how they affected the lives of the people.⁴

II. YEARS OF CRISIS, 1275-1278

On 17 November 1278 all the Jews in England were unexpectedly seized and imprisoned on the charge of coin-clipping. Immediately afterwards the king ordered the arrest of all goldsmiths and others suspected of helping Jewish coin-clippers by exchanging clipped money for good.⁵ The goods and chattels of the suspects, both Christians and Jews, were

¹ C. M. Cipolla, 'Currency Depreciation in Medieval Europe', *Economic History Review*, 2nd ser. xv (1963).

² This idea was put forward by R. S. Lopez, 'The Dollar of the Middle Ages', *Journal of Economic History*, xi (1951).

³ Before the reign of Edward I, halfpennies and farthings had been formed by cutting the pennies into two or four pieces at the mint.

⁴ Michael Prestwich's article, 'Edward I's Monetary Policies and Their Consequences', *Economic History*

Review, 2nd ser. xxii (1969), is largely based on published documents.

⁵ *The Chronicle of Bury St. Edmunds, 1212-1301*, ed. Antonia Gransden (London, 1964), p. 66; Annals of Dunstable, *Annales Monastici*, ed. H. R. Luard (Rolls Series, London, 1865-9), iii, p. 279; Annals of Waverley, *Annales Monastici*, ii, p. 390; Chronicle of Thomas Wykes, *Annales Monastici*, iv, p. 278; Annals of Worcester, *Annales Monastici*, iv, p. 474; *Cal. Close Rolls, 1272-79*, pp. 516, 517.

seized at the time of their arrest and a thorough search was ordered 'above ground and below' where there was any hope of finding clipped money.¹ In addition all mint officials were arrested, and the royal exchanges of London and Canterbury were taken into the king's hands.² Finally, on 7 December, Edward I decreed that no one should take out of the country silver plate, clipped money, or other broken silver; a measure that was clearly designed to prevent anyone from escaping with incriminating evidence. In January the bailiffs of the major ports were ordered to search all merchants and others to make sure that this prohibition was obeyed.³ Such drastic measures were unprecedented but had been necessitated by the severity of the monetary crisis facing the king.

This monetary crisis had developed slowly but surely during the preceding three years, while Edward had been distracted by other pressing problems. On his return to England in 1274, the king had been faced with complaints about misgovernment at home, as well as trouble in Wales, which was finally to erupt in war in November 1276. Financial problems were also worrying him. He did not have enough revenue to meet his expenses, as his expedition to the Holy Land was not yet paid for and debts incurred while he was in Gascony were still outstanding. In addition he had to decide whether to take notice of the Council of Lyon's recent call for no further toleration of usury. Acting decisively, he tackled one problem after another. In November 1274 he ordered all merchant usurers to leave the country within twenty days or lose their lives and goods.⁴ His need for revenue, however, was greater than his desire to comply with the wishes of the Church and in 1275 the Italian merchants were allowed to recover their goods and remain in the country, on payment, of course, of substantial fines.⁵ Also in 1275 he persuaded Parliament to grant him a fifteenth and, an even more important source of revenue, the customs on wool and hides. The Statute of Jewry tried to deal with the problem of Jewish usury and the Statute of Westminster I and an inquest on sheriffs tackled the major administrative and judicial problems facing the royal government.

With so many parts of the government demanding his attention, Edward decided to leave the mint and the coinage as it was for the moment. The administrative head of the mints, Bartholomew de Castello, had been appointed by Henry III in 1266 and was left in office. Edward also continued to issue the long-cross coins of his father, still bearing the title *Henricus*, although with a new head and a slightly different hair-style.⁶ In the Statute of Westminster I the making of false money was classed as a major crime,⁷ but Edward clearly did not have the time or consider the problem sufficiently serious to take any further action. Yet the problem of bad money existed, even though the king was not yet aware of it. Although there are only three recorded prosecutions in 1275,⁸ more coin-clippers were at work and their activities gradually came to the king's attention. In

¹ *Chronicon Petrobургense* (Camden Society, Old Series, vol. 47), pp. 26-7, contains a copy of the writ sent to the sheriff of Northampton ordering the arrest of the goldsmiths and the subsequent search for concealed goods, but there is no record of this writ in either the Patent or Close Rolls. In S.C. 1/21, no. 136, there is a report of the arrest of Irish goldsmiths and the search for clipped and false money.

² *Chronicle of Bury St. Edmunds*, p. 66; *French Chronicle of London*, ed. H. T. Riley (London, 1863), p. 239.

³ *Cal. Close Rolls, 1272-79*, p. 518; *Foedera*, i. ii. 564; *Cal. Fine Rolls, 1272-1307*, p. 106.

⁴ *Cal. Close Rolls, 1272-79*, pp. 108, 144.

⁵ *Ibid.*, p. 161; *Cal. Patent Rolls, 1272-81*, pp. 91, 92, 93, 94, 95, 128, 448.

⁶ Sir Charles Oman, *The Coinage of England* (Oxford, 1931), p. 158.

⁷ *Statute of Westminster*, i. c. 15.

⁸ One Christian, Roger de Hatfield, was charged with the possession of silver coming from false money or the clipping of money (*Cal. Close Rolls, 1272-79*, p. 188) and two Jews left the country rather than answer charges of coin-clipping (*Calendar of the Plea Rolls of the Exchequer of the Jews*, ii. 299).

December 1276 he felt it necessary to issue special commissions of oyer and terminer in London and Nottingham to try Jews accused of coin-clipping and their accomplices.¹ Even so the problem of bad money was not as serious in 1276 as it became during the next two years, when more and more men, both Christians and Jews, were brought before the courts on charges of clipping and other monetary offences.²

This sharp increase in the number of prosecutions was partly the result of a growing concern on the part of the government, but also reflected increased activity. More Jews were involved in clipping after 1275 than before, as they tried to escape the consequences of Edward's legislation. The Statute of Jewry strictly curtailed money-lending, their principal occupation. Although in theory they were compensated by being allowed to trade, to purchase homesteads in cities and boroughs, and to take farms for terms not exceeding ten years, in practice these occupations were rarely open to them. In addition, at the very time they were finding it harder to make a livelihood, they were heavily tallaged. A tallage of 5,000 marks, for example, had been levied on the Jews just before Henry III's death and a new one, assessed at one-third of all their moveable goods, was imposed by Edward's ministers late in 1273. While much of this money was still being collected, fresh tallages were levied in 1276, 1277, and 1278.³ The harshness of these exactions, coupled with the restrictions imposed by the Statute of Jewry, incited a large number of Jews to raise money by whatever means they could. They tried to make a profit from the coinage, either by clipping the current coins and turning the clipping into sheets of silver or by coating base metal as silver and passing the result as pure silver.⁴

Clipped coin, however, had to be passed into circulation and the Jews utilized a variety of outlets. Goldsmiths, for example, were frequently tempted to buy clipped coin.⁵ Other Christians were also willing to visit Jews and exchange good coin for clipped coin.⁶ Finally the Warden of the exchange, Bartholomew de Castello, and the exchanger, Roger Talbot, were both accused of buying plates of clipped silver, knowing them to be clipped, at 15s. or 16s. a pound and then selling them to the mint at 19s. 6d. a pound. This accusation was never proved, but it was generally agreed that Roger Talbot did buy some plates of clipped silver when they were brought to the exchange, without realizing that they were clipped.⁷

Another way of profiting from the coinage was to make small halfpennies. Officially halfpennies were made at the mint by cutting pennies in half, but they were frequently cut or broken illegally. As money came to be used for more and more transactions, the demand for small change grew. When a gallon of ale cost $\frac{3}{4}$ d. or 1d.,⁸ the casual visitor to a tavern needed plenty of farthings. Numismatic evidence from site finds indicates that

¹ *Cal. Patent Rolls, 1272-81*, p. 236; see *Foedera*, i. ii. 539 for the full text. *The French Chronicle of London*, p. 238, says that three people (one man and two women) were condemned in London as a result of this commission.

² According to the *Jewish Plea Rolls* eight Jews were accused of coin-clipping in 1276 and forty-four Jews and Christians in 1277. In the report of the under-constable of the Tower of London (E. 101/249/22) fifteen Jews and Christians in London were accused of monetary offences between Jan. 1275 and June 1277 (a period of two and a half years) and twenty-one men were accused of similar offences between June 1277 and Dec. 1278 (a period of one year and a half).

³ H. G. Richardson, *The English Jewry under the Angevin Kings* (London, 1960), pp. 214-16.

⁴ There is no doubt that many accused Jews were guilty, as clipped and false plate was found on them as well as the scissors and pots that they used. *Jewish Plea Rolls*, iii. 119, 124, 125, 205, 277, 309.

⁵ *Cal. Close Rolls, 1272-79*, p. 475; *Cal. Patent Rolls, 1272-81*, p. 255; *Jewish Plea Rolls*, iii. 276-7.

⁶ E. 101/249/22.

⁷ These and other accusations against the mint officials can be found on a special roll, E. 101/301/1.

⁸ Assize of Bread and Ale, 1276-8. *Calendar of Letter Books of the City of London*, ed. R. R. Sharpe (London, 1899), A, p. 216.

petty coins made up a large percentage of the total currency.¹ Certainly a large number of halfpennies seem to have been circulating in London in 1277 and 1278, for when men registered their debts there, they frequently specified that two-thirds or three-quarters were to be repaid in round pence and the remainder in good halfpence. Other men preferred to be paid only half in pennies and the rest in halfpennies.² With so many halfpennies in circulation, it must have been tempting to make some by cutting pennies slightly off-centre and then melting down and reusing the parings. Between 1275 and 1278 eight men were accused in London of making small halfpennies,³ and there were probably many more who did not get caught. In Ireland, the Italian merchants, who were in charge of collecting the customs duties, were accused of cutting the money they received and retaining the big halfpennies for making silver vessels and using the small halfpennies for trade.⁴ Although this accusation was never fully proved, it seems a likely thing to have happened.

The soundness of the currency was also being undermined by the actions of leading mint officials.⁵ In 1279 Philip de Cambio, the chief moneyer, was accused of adding more than the legal amount of alloy to the silver from which he made the money, and the assayers, William Harlewyn and Thomas de Brancestre, were accused of condoning his actions by accepting as legal money which they ought to have rejected as false. There is no doubt about their guilt. When £113 of newly minted and approved money was tested by another moneyer, Æthelbert the Lombard, in the presence of the Treasurer and twelve citizens of London, it was discovered that $8\frac{1}{2}d.$ of copper had been added to each pound of these pennies, whereas in accordance with the standard of Henry III a pound should have contained no more than $6d.$ of copper. But it is impossible to tell how much money was made according to this reduced standard. Philip de Cambio was appointed moneyer on 18 May 1278,⁶ and between then and his arrest in November 1278 he could have minted several thousand pounds. If all these coins contained too much copper, then the currency was undoubtedly being weakened, but probably not seriously. These new coins, even with $2\frac{1}{2}d.$ of extra copper, were better quality than those which had been heavily clipped,⁷ or those which had worn thin with age and constant use. It had been over thirty years since the last recoinage had taken place under Henry III and the whole currency had deteriorated badly.

As a result of all these activities—coin clipping, the manufacture of small halfpennies, and the making of imperfect new coins—men, by 1278, had little confidence in the royal currency. English merchants were worried about receiving poor money for their goods

¹ In the Meols find at Cheshire, where marine erosion destroyed the site of a medieval settlement, roughly half the coins were cut halves or quarters or the later round halfpennies and farthings. Among the seventy-two coins of Henry III and the seventy coins of Edward I found there in 1828-63, there were more cut halves than whole pieces, as well as numerous cut quarters (D. M. Metcalf, 'Some Finds of Medieval Coins from Scotland and the North of England', *BNJ* xxx (1960/1), pp. 88-123). Among coins found at Dunwich the proportion of cut money was even higher, with one penny being found to four halves and five quarters (Edward R. H. Hancox, 'Finds of Medieval Cut Halfpence and Farthings at Dunwich', *BNJ* v (1908), pp. 123-33; cf. R. Seaman, 'A Further Find of

Coins from Dunwich', *BNJ* xli (1972)).

² Of the forty-eight debts registered in 6 Edward I, nineteen included halfpence. In the following year only eighteen debts were registered, but ten specified repayment in halfpence (*Cal. Letter Books, London, A*, 16-29).

³ E. 101/249/22.

⁴ S.C. 1/21, no. 136.

⁵ The record of a hearing before Stephen de Pencestre, Walter de Helyon and John de Cobham concerning transgressions of the money (E. 101/301/1).

⁶ E. 159/51, m. 8.

⁷ At the time of the general arrest, clipped coins were found whose face value was £406, but only weighed £377. 19s. (E. 372/123, m. 22).

or in repayment of their loans. When Londoners, for example, registered their debts, many of them requested repayment in 'good, unclipped money'.¹ Foreign merchants were staying away from England with their merchandise because they were afraid of being paid with bad money.² The royal mint at Canterbury was starved for silver because English and foreign merchants who had acquired silver on the Continent were reluctant to exchange it for English coin, even though it was newly minted.³ The chronicler, Thomas Wykes, expressed the general distrust when he said that money by weight was only worth half its numerical value.⁴ This was undoubtedly exaggerated,⁵ but many people believed it to be true. Much of the old money had become so worn out or so badly clipped that it was refused and despised by everyone.⁶

Many prices, therefore, rose sharply. Cheese, for example, which had been selling on an average for 9s. 10½d. a wey in 1276 and 9s. 9½d. in 1277 cost 11s. 0½d. in 1278. The price of pigs jumped from 2s. 1d. in 1276 to 3s. 9½d. in 1278.⁷ Yet there is no evidence of bad weather and grain prices were low which indicates that there was a good harvest.⁸ Edward, however, had been spending heavily on the Welsh war, with help from the Riccardi, and this unusual government expenditure could have caused prices to rise. But the rise was so sudden and so steep that a contributing factor was surely the increased circulation of bad money.

By the end of 1278 the monetary crisis had become so severe that it could be solved only by a recoinage and new, drastic measures to discourage clipping. Existing methods were clearly inadequate. Several Jews were indicted and fined more than once, so that obviously the fines were not heavy enough to act as a deterrent.⁹ Men were often wrongly accused. If someone was found with plates of silver made from melted clippings in his possession, he was usually regarded as guilty of clipping and later, when he was able to show that he bought the plate legally from someone else, he had to be released and acquitted.¹⁰ Jews were also accused on flimsy evidence. Jake, son of Bonami, for example, was arrested in London in 1277 because a young girl of seven or eight had found some clipped coin in the street near his house.¹¹ Thus much time was wasted in trials that ended in acquittal and the guilty often escaped entirely or were only lightly punished.¹²

¹ Twenty-one of the forty-eight debts registered in *The Letter Books of the City of London* in 1277/8 requested that the debt should be repaid in 'good money' and eight added that this money was not to be clipped. In 1279 fourteen of the eighteen registered debts specified repayment in good money and nine of these further requested unclipped money.

² Chronicle of Thomas Wykes, *Annales Monastici*, iv. 278.

³ No money at all was made at Canterbury between 1274 and 1277 and in 1278 only £803. 7s. 9d. was minted there (E. 372/123, m. 21).

⁴ *Annales Monastici*, iv. 278.

⁵ Once the king had decided on a recoinage and all the old money was called in, some of it was found to be up to the required standard and could be used. The Patent Rolls are full of commands to the Wardens of the exchange to pay to the wardrobe various sums out of the 'old and good money' coming to the exchange (*Cal. Patent Rolls, 1272-81*, pp. 326, 367, 368, 370, 389, 390, 393, 395).

⁶ Complaints were reaching the king (*Chronicon*

Petroburgense, p. 30; *The Chronicle of Pierre de Langtoft*, ed. Thomas Wright (Rolls Series, London, 1866-8), ii. 175.

⁷ D. L. Farmer, 'Some Livestock Price Movements in Thirteenth Century England', *Economic History Review*, 2nd ser. xxii (1969), pp. 1-17.

⁸ J. Titow, 'Evidence of Weather in the Account Rolls of the Bishopric of Winchester, 1209-1350', *Economic History Review*, 2nd ser. xii (1960).

⁹ E. 101/249/22.

¹⁰ *Jewish Plea Rolls*, iii, 124-5, 318-19; *Select Pleas, Starrs and Other Records of the Jewish Exchequer, 1220-84*, ed. J. M. Rigg (Selden Society, 1901), p. 91.

¹¹ *Jewish Plea Rolls*, iii. 291.

¹² The general ineffectiveness of the measures from 1276 to 1278 can be seen from the fact that several of those found guilty in 1279 had previous convictions. Jocus of Marlborough, who was fined £20 in 1279 (E. 372/124, m. 30), had been accused of making small halfpennies and illegal exchanging in the preceding two years (E. 101/249/22). Jocus, son of Salle, Jew of Canterbury, who was hanged in 1279 (C. 47/9/50), is

Consequently all Jews and all goldsmiths were arrested in November 1278. This time the king wanted no one to escape.¹

The Jews who were found guilty of coin-clipping were hanged or fined severely. Thus Master Elias, son of Master Moses, one of the richest Jews in London, was pardoned after paying 1,000 marks.² Other leading Jews were also released in return for substantial fines, which took them many years to pay.³ But at least they kept their lives. For, according to the Dunstable annalist, 280 Jews were executed in London alone.⁴ This number is almost certainly exaggerated, as Walter de Helyon, who was in charge of selling the goods of condemned Jews in south-east England, mentions only six Jews hanged in Canterbury, five hanged in Norwich and one burnt, three hanged at Bedford, three at London, and one at Oxford.⁵ In the west of England only one Jew, Benedict of Winchester, is known to have been hanged.⁶ For the north of England there are no definite figures.⁷ Thus many Jews whose names have disappeared must have been hanged, but all the evidence at present available points to the death of thirty to fifty Jews for the whole of England, a figure considerably less than that suggested by the chroniclers. Even so, it remains an unusually large number, considering that the death penalty had not been exacted for monetary offences in the early part of Edward's reign, and, while it remained a threat, was only rarely exacted in the future.⁸

The Christians were treated less severely. Only a few were executed,⁹ including the moneyer Philip de Cambio and one of the assayers, William Harlewyn, who were both drawn and hanged. The other mint officials, however, escaped death by virtue of their

probably the same person as the Joceus of Canterbury who was earlier fined £5. 6s. 8d. because clippings were found in his house and 36s. 8d. for transgressions of halfpennies (E. 101/249/22). Vives Le Lung, Jew of Oxford, who was hanged in 1279 (E. 159/56, m. 2), had been accused of clipping in 1276, although he protested his innocence (*Jewish Plea Rolls*, ii. 185).

¹ In Jan. 1279, three special commissions were appointed to try the Christians and Jews who had been arrested (*Cal. Patent Rolls*, 1272-81, p. 338).

² *Cal. Patent Rolls*, 1272-81, p. 322; *Cal. Fine Rolls*, 1272-1307, p. 114.

³ Bonefey of Cricklade, for example, was fined 200 marks (E. 372/124, m. 30). In 1282 he still owed £25. 13s. 6d., which he was not able to pay on account of his poverty, because many of his debtors had not paid him. The king, therefore, agreed that he could pay his arrears at the rate of 40s. a year (E. 159/55, m. 4d). In 1285 he was imprisoned for another offence and so was not even able to pay 40s. a year. The rate was then reduced to 20s. a year (*Cal. Fine Rolls*, 1272-1307, p. 216).

⁴ *Annales Monastici*, iii. 279. Other chroniclers give similar figures. *The French Chronicle of London*, p. 239, and *Annales Londonienses*, p. 88 both state 293 Jews were killed. *The Chronicle of Bury St. Edmunds*, p. 67, said that 267 Jews were condemned to death in London.

⁵ C. 47/9/50. The same number, plus an additional one, were cited by Philip de Willoughby in his account of the money received from the sale of the chattels of condemned Jews (E. 372/124, m. 30).

⁶ E. 372/123, m. 23. See also Michael Adler, 'Inventory of the Property of the Condemned Jews (1285)', *Jewish Historical Society, Miscellanies*, ii. 56-71. Benedict had been one of the leading Jews in Winchester, acting as chirographer and representing the Jewish community in a dispute over a tallage.

⁷ E. 372/123, m. 22.

⁸ The statute of money of 1284 said that anyone caught smuggling in false or counterfeit money would forfeit his body and goods (*Statutes of the Realm*, i. p. 219; C. 66/103, m. 5 schedule). The statute of money of 1291 (?) restricted forfeiture of body and goods to those caught bringing in or using clipped or counterfeit money for the third time (*Statutes*, i. 220; *Cal. Close Rolls*, 1288-96, p. 203; B.M. Addit. MS. 32085). The statute of Stepney of 1299 similarly threatened loss of life and goods for infringement of its regulations (*Statutes*, i. 131). But there are only two recorded instances of the death penalty being carried out, although there may have been other occasions which have escaped the records. In 1295 two Irishmen were hanged and drawn for making false money (*Calendar of the Justiciary Rolls, Ireland, 1295-1303*, ed. James Mills (Dublin, 1905), i. 34); and in 1300 two Flemish merchants were hanged for bringing false and counterfeit money into England (E. 159/74, m. 31d).

⁹ Two Christians known to have been executed are John le Havekere, who was hanged at London for forgery of the king's money (*Cal. Close Rolls*, 1279-88, p. 87) and William de Netlington, who was hanged and drawn at Bristol for clipping (*Cal. Patent Rolls*, 1281-92, p. 151).

clerical status.¹ Thus the second assayer, Thomas de Brancestre, was allowed to pay a 1,000 marks fine, even though, at the time of his arrest, he was not wearing clerical garb, nor did he have a tonsure. The Warden of the exchange, Bartholomew de Castello, also claimed to be a clerk, and the king decided that his case should be heard in the presence of the bishop of Bath and Wells. But the bishop kept refusing to attend, so the hearing was continually postponed, and, although Bartholomew was dismissed from his post as Warden, he stayed alive and did not even have to pay a fine.² Yet his clerk, who had much less responsibility, was fined £80 and probably would have suffered more if he too had not claimed benefit of clergy.³ The deputy warden, a goldsmith, William de Watford, was fined 500 marks, even though he was cleared of the charges of buying clipped plate and consenting to the manufacture of bad money. He had to seek the help of two Italian merchants, Orlandino and Henry de Podio, as well as Bartholomew de Castello, in order to pay the first instalment.⁴

These fines, together with the sale of forfeited goods, brought the king an extra £10,815. 14s. 4d. revenue, of which half was used to finance the recoinage and the rest was swallowed up in expenses, such as wages to justices.⁵ For by 1279 the king was short of money. The fifteenth of 1275 had been used to meet the debts incurred by the king in Gascony.⁶ The tallages on the Jews had yielded less than the king had hoped and the customs on wool and hides had not been enough to cope with the extraordinary expenditure incurred during the Welsh war of 1277.⁷ Thus, although the decision to carry out the recoinage had been taken in January 1279,⁸ work did not begin until May, when dies for the new coins were issued to the Wardens. This delay was probably to allow some of the money collected by the justices to reach the Wardens.

It was, perhaps, reasonable that those responsible for the bad state of the coinage should pay for its improvement, but one cannot escape the fact that the Jews paid more heavily than the Christians, for many of them lost not only their goods, but also their lives. Nevertheless the severity of the royal attack on clippers and counterfeiters in 1279 was the result of the severity of the crisis facing the king. Between 1276 and 1278 Christians and Jews, spurred on by the curtailment of usury in 1275 and encouraged by the

¹ S.C. 1/48 no. 28.

² Sir John Craig, *The Mint, a History of the London Mint from A.D. 287 to 1948* (Cambridge, 1953), p. 39, states that Bartholomew de Castello died in Nov. 1278. In fact he was very much alive. In Feb. 1279 he was ordered to deliver to the new Wardens any money from the exchange that was still in his hands (*Cal. Patent Rolls, 1278-81*, p. 301) and later the same year he was delivered to the custody of the marshal until he paid the arrears of his account (Thomas Madox, *History and Antiquities of the Exchequer* (London, 1769), ii. 134-5). Throughout the eighties he was active as a moneylender (*Cal. Close Rolls, 1279-88*, pp. 54, 110, 115, 360, 361, 377, 481), and he finally died in 1296 (E. 159/70, m. 55).

³ E. 101/301/1.

⁴ £80 of his fine was still outstanding in 1285 and he was forced to sell some of his lands to help pay his debts (E. 372/124, m. 30; E. 159/59, m. 2; E. 368/59, m. 3d).

⁵ £7,449. 16s. 1½d. from south-east England (E. 372/124, m. 30).

£2,629. 5s. from north of England (E. 372/123, m. 72).

£736. 13s. 2½d. from the west of England (*Jewish Historical Society, Miscellanies*, ii. 56-71).

⁶ Sir Maurice Powicke, *The Thirteenth Century*, 2nd edn. (Oxford, 1962), p. 344.

⁷ The customs for the nine years 1278-87 averaged £8,500 a year (J. Conway Davies, 'The Wool Customs Accounts for Newcastle upon Tyne for the Reign of Edward I', *Archaeologia Aeliana*, 4th ser. (1954), p. 220). The war expenses amounted to £20,000 which the king met by borrowing from the merchants of Lucca, but this loan, of course, had to be repaid (T. F. Tout, *Chapters in the Administrative History of Medieval England* (Manchester, 1920), i. 112).

⁸ The state of the coinage was discussed at this time (*Cal. Patent Rolls, 1272-81*, p. 338) and Gregory de Rokesle, citizen of London, and Orlandino de Podio, merchant of Lucca, were appointed the new Wardens of the exchange on 7 Jan. (*Cal. Fine Rolls, 1272-1307*, p. 106).

general deterioration of the coinage, had increasingly engaged in clipping and other monetary offences. A recoinage was urgently needed, but was useless unless something was done to discourage clipping. In addition the recoinage was expensive and the king was short of money, so that the fines and forfeitures for trespasses of money not only helped to finance the recoinage, but also provided a welcome addition to the royal income.

III. THE RECOINAGE OF 1279-1281

Edward I, in carrying out his recoinage, had two main concerns. He needed to restore and maintain the stability of his coinage, but he had to do this without overburdening his already straitened financial resources. Only half the revenue received from the monetary fines and forfeitures was given to the Wardens of the exchange, and then it was only slowly collected and was not immediately available. Some additional method had to be found of paying for the extra expenses involved in the recoinage, as existing mint buildings and staff were inadequate to cope with the additional work. New men, new buildings, and new equipment were all urgently needed, but expensive. Yet if the king chose the easiest solution and debased the coins in order to pay for the recoinage he threatened to undermine his basic purpose of restoring confidence in his money. Consequently between 1279 and 1281, Edward slightly increased the number of coins that were cut from a pound and the amount of copper that was added to the silver, but he also took vigorous measures to discourage clipping and the manufacture of small halfpennies, in the hope that this would maintain confidence in his currency.

The most immediate royal problem, however, was to find competent and trustworthy replacements for the discredited mint officials. On 7 January 1279, therefore, the king appointed new Wardens for the exchange, Gregory de Rokesle and Orlandino de Podio.¹ In accordance with tradition, Gregory de Rokesle came from one of the leading London aldermanic families. Nominally a goldsmith, he was also active as a merchant, trading in corn, fish, and cloth as well as exporting wool and importing wine. He had previously served the city as sheriff, alderman, and mayor, and, at the same time, the king as a commissioner in the Anglo-Flemish dispute in 1275 and a tax-collector in 1278.² Well known and trusted by the king, he was a natural choice to replace Bartholomew de Castello. Orlandino de Podio, on the other hand, was clearly chosen because the help and backing of the Riccardi were needed for the recoinage. He was to some extent simply their attorney and the exchange was described as being delivered to 'the merchants of Lucca commorant in London'.³ But he was also one of the royal companions, being the only layman who possessed the right of sleeping in the wardrobe. He was constantly at the king's side and had provided much of the money to finance the recent Welsh war.⁴

In addition new moneyers and a new assayer were recruited from abroad. In March two men from Marseilles, William de Turnemire and his brother Peter, were appointed moneyers and were granted £100 a year as a fee for their expenses, and in April another moneyer, Hubert Alion of Asti, was promised £200 a year for his maintenance.⁵ For his

¹ *Cal. Fine Rolls, 1272-1307*, p. 106.

² Full details of his career can be found in G. A. Williams, *Medieval London from Commune to Capital* (London, 1963), pp. 330-1.

³ *Cal. Patent Rolls, 1272-81*, p. 301. In the audit of the account of Bartholomew de Castello, it states that he delivered a 1,000 pounds to 'Gregory de Rokesle and

the merchants of Lucca, keepers of the said exchange' (Thomas Madox, *History and Antiquities of the Exchequer* (London, 1796), ii. 134-5).

⁴ T. F. Tout, *Chapters in the Administrative History of Medieval England* (Manchester, 1920), ii. 29.

⁵ *Cal. Patent Rolls, 1272-81*, pp. 305, 313.

principal assayer the king chose a Florentine, Boniface Galgani. The lesser officials, however, remained English, although new ones were appointed.¹ But these men, although carefully chosen, might be as tempted to undermine the coinage as their predecessors had been. To prevent this the king appointed one of the exchequer clerks, John de Maidstone, to keep a close watch on the activities of both the Wardens and the moneyers, with the double title of clerk of the exchange and comptroller, and the additional task of keeping duplicate records of all mint accounts and correspondence.²

To prevent a recurrence of the monetary crisis of 1278, the king made several important changes in the coinage.³ He introduced the minting of round farthings in 1279, and, when these proved popular, he started coining round halfpennies in August 1280. Merchants naturally preferred these new round coins to the older cut ones, and when they wanted small change in repayment of their debts specified that they were to be paid in 'round halfpence'.⁴ Although round pennies and halfpence were still occasionally cut in half,⁵ the widespread practice of cutting coins illegally seems to have disappeared. The new money was also easily distinguished from the old long-cross coins of Henry III. Whereas his father had been represented by a copiously bearded portrait, Edward chose to be shown by a young and beardless king's head and, on the reverse, the name of the moneyer was now omitted.⁶ In addition the king increased the number of coins that were cut from each pound of silver and the amount of alloy that was added to it. Under Henry III 240 pennies had been cut from a pound of silver, and 6*d.* of copper had been mixed with it.⁷ In 1279 Edward decided to make 243 pence to the pound instead of 240 and to add 8½*d.* of copper,⁸ slightly more copper than the amount for which he had recently hanged Philip de Cambio. He probably realized that the old coinage had deteriorated so badly that it was impractical to return to the old standard of Henry III and therefore decided to accept a *fait accompli* and make Philip's reduced standard the legal one. Finally, Edward, influenced by the minting of large silver pieces abroad, issued a new coin, the groat, which was equal to four pennies.⁹

¹ On 6 July, three new keepers of the dies, John de Blakethorn, Ralph de Raby, and John de Heywood were sworn in (Shirley Fox and Earle Fox, 'Numismatic History of the Reigns of Edward I, II, and III', *BNJ* vii (1911), p. 98).

² In the household ordinance of 1279, John de Maidstone is described as a clerk of the marshalsea (Tout, *Charters*, ii, p. 160). For his appointment as comptroller, see Charles Johnson, *The De Moneta of Nicholas Oresme and English Mint Documents* (London, Nelson, 1956), p. 58.

³ In the Red Book of the Exchequer there is a document headed *Forma Nove Monete* which probably dates from May 1279 and sets forth all the conditions for the new coinage. It has been reprinted and translated by Charles Johnson in *De Moneta*, pp. 56-8. See also Sir John Craig, *The Mint, a History of the London Mint from A.D. 287 to 1948* (Cambridge, 1953).

⁴ *Calendar of Letter Books of the City of London*, ed. R. R. Sharpe (London, 1899), A, p. 28.

⁵ D. M. Metcalf, 'Some Finds of Medieval Coins from Scotland and the North of England', *BNJ* xxx (1960/1), p. 113.

⁶ For fuller details and a complete classification

of coins see J. J. North, *English Hammered Coinage* (London, 1960), ii, 8-18; Sir Charles Oman, *The Coinage of England* (Oxford, 1931); Fox, *BNJ* vii (1911).

⁷ S.C. 1/48, no. 28. Cf. Johnson, *De Moneta*, p. 51. In Edward II's reign men digging in a ditch outside Norwich found 9*s.* 8*d.* of money made under Henry III. When some of this money was assayed, a pound was found to be more in value by 3*d.* than the money then current (E. 368/83, mm. 44, 44d).

⁸ The best evidence for the composition of pennies in 1279 is the information given orally to the monks of St. Edmunds by Gregory de Rokesle and subsequently written down by them (The St. Edmundsbury Trial Plate, Johnson, *De Moneta*, p. 87). According to this, the mint pound contained 12 ounces, each ounce weighing 20 pennyweights, and of this 11 ounces 2½ pennyweights had to be fine silver and the rest alloy.

⁹ The mint accounts made no distinction between groats and pennies, so there is no means of knowing how many groats were issued, but their manufacture appears to have ceased by 1286, if not before (Fox, *BNJ* vii, pp. 126-7). Why they were so unsuccessful is not known.

While preparations for the recoinage were still under way,¹ the king decreed that false and clipped money was no longer to be current in the country. No one was to buy or sell or do any business with it, but, instead, to take it to one of the exchanges set up in ten major towns and there change it for good unclipped pennies and halfpennies of the old type, which remained legal tender for another year.² Although, occasionally, wardrobe officials were willing to exchange £100 of clipped money for an equivalent amount of good money,³ in general coins were exchanged by weight, and, if their money had been badly clipped, men received only a few good coins in return.⁴ To find sufficient good money to supply all the exchanges, the king borrowed £20,300 from different Italian societies.⁵ Several of the exchanges were then entrusted to their care and later, when the new money was ready, they exchanged it for the old.⁶

The clipped money that was brought into the exchanges or seized by the commissioners for the trespass of money was then turned into new money at great profit to the king. By 1 January 1280, £92,379. 12s. of old money had been reminted at London. In addition £15,486. 12s. 11d. of silver was brought in from abroad and coined, partly as a result of the efforts of Yved de Domo, merchant of Ghent, who was authorized to buy plates of silver for the king's money.⁷ Although 243 pennies were cut from each pound of this silver, the merchant who brought it received back only 240 pennies, less the amount deducted for the cost of minting. The extra three pennies were a hidden profit for the king. He claimed, with some justification, that he needed it to meet unusual expenditure. Extra weights and balances were required; coal had to be brought from Kingston to the Tower of London with a keeper to look after it; candles were bought so that the moneyers could work late, and the doorkeeper, who had extra work to do, received a rise in salary from 13s. 4d. a year to £4. 11s. 3d. a year (3d. a day).⁸ Even so, when all his expenses had been paid, the king still made a net profit of £3,921. 17s. 4d.⁹ from the work of the London mint alone, as the other mints were not yet open.

Despite frequent complaints from the archbishop, minting did not begin at Canterbury until 1280. The mint had been closed when Bartholomew de Castello was arrested in November 1278, and sealed with the seal of Stephen de Pencestre. The Wardens dared not break the seal without Pencestre's authority and this was not given until after he received a letter from the archbishop explaining the situation.¹⁰ Finally on 15 November

¹ The Wardens received the dies for the new coinage on 17 May (E. 159/52, m. 6d), but the first new coins were not issued until 4 Aug. 1279.

² There is no record of the establishment of the exchanges in either the Patent or Close Rolls, but in the Ancient Correspondence there is a letter from Stephen de Pencestre to the bailiffs and barons of the port of Hastings, which includes a copy of the king's original writ dated 19 June 1279 (S.C. 1/30, no. 183). Two of the chronicles (*Dunstable Annals*, p. 280; *Thomas Wykes*, p. 280) mention the setting up of the exchanges, but do not list the towns, and the Peterborough chronicle records both the list of towns and the prohibition of clipped and false money (p. 50).

³ S.C. 1/18, no. 174.

⁴ A good example of how men lost money at the exchanges can be found in the account of the priory of Christ Church, Canterbury. In 1280 the Treasurer sent £188. 19s. 5d. to the exchange and lost £19. 12s. 8½d. The following year they sent only £36. 7s. 10d. but lost

£6. 13s. 7d. (Canterbury MS. V.M.A. 1).

⁵ Account of Gregory de Rokesle and Orlandino de Podio of money received to make exchange from 28 Apr. 1279, to 20 Nov. 1279 (E. 372/132, m. 3). The £20,300 had been repaid to the merchants by Oct. 1280.

⁶ On 5 July 1279 Edward promised the Mozzi that all the money which they handed over to the Wardens would be returned to them in new coins within fifteen days (Chancery Miscellanea C. 47, Bundle 35, File 11).

⁷ *Cal. Patent Rolls, 1272-81*, p. 322.

⁸ E. 372/132, m. 3 (a mint account enrolled on the Pipe Roll).

⁹ See Appendix A, Table 2 (From Apr. to Nov. 1279).

¹⁰ *Registrum Epistolarum Fratris Johannis Peckham Archiepiscopi Cantuariensis*, ed. Charles Trice Martin (Rolls Series, London, 1882), i. 52; *Cal. Close Rolls, 1272-79*, p. 532.

1279 the new dies for the Canterbury mint were ready and the three which belonged to the archbishop were delivered to his servant, Henry Lovel, who, the same day, presented William Tollomer de Perogal to serve as the archbishop's moneyer.¹ A few days later, however, the archbishop agreed to hand over his three dies to Gregory de Rokesle and Orlandino de Podio together with his exchange at Canterbury and all the revenues and profits of the dies and exchange.² This concession was to come into effect on 27 November 1279, and to last for three years. In return the archbishop was to receive 1,000 marks of good, new sterling in two instalments, or, if he preferred, the 1,000 marks could be deducted from the money he owed the king. Why the archbishop made this agreement is not clear, but he may have wished to avoid paying his share of the considerable expenses involved in making the Canterbury mint operational again.

The other major ecclesiastical mints were also granted seisin of their dies in November 1279, but, for various reasons, work did not begin there until the following year. The bishop of Durham, for example, returned only two old dies in November, and had to wait until he had handed over the third old die, before he received the three new ones, so that the first new coins were not struck until January 1280.³ The Abbot of St. Edmunds was not sure what changes the king had made and asked for information about the number of pence to be made to the pound and the amount of pure silver. He also petitioned the king for a standard of the money (i.e. a bar of coin fineness to be used as a standard of reference). Although the king and his council refused to give the abbot the standard, they did ask Gregory de Rokesle to give him the necessary information by word of mouth.⁴ The coins of St. Edmunds, however, differed from those of the rest of the country in having on them the name of the moneyer, Robert de Hadley, instead of that of the mint, even though the use of the moneyer's name had been suppressed everywhere else. Furthermore, the first coins were struck from a very peculiar die, which seems to have been made locally and to have been modelled on the groat.⁵

One possible explanation for this anomaly was put forward by the Fox brothers. They suggested that owing to the long dispute over the question of a standard, the supply of a die to the abbot was overlooked. The new abbot, who had never superintended a coinage, was ignorant of the usual routine and allowed the monks to make their own die. When this first die was returned to the exchequer for replacement it was automatically copied. There are several serious flaws in this argument. First, it was well known that new dies could be supplied only by the exchequer or the exchange; under no circumstances was anyone allowed to manufacture his own. Even if the new abbot was unaware of this, all the other monks and especially the sacristan cannot have been ignorant of the customary procedure. Furthermore the abbot had shown himself particularly anxious to find out the exact composition of the new money, so it is unlikely that he would then

¹ E. 368/53, m. 2d.

² *Cal. Patent Rolls, 1272-81*, p. 334; E. 368/53, m. 2d. This document offers further proof that Orlandino de Podio was acting as representative of the Riccardi, since he pledged not only himself, but his companions, citizens, and merchants of Lucca, to carry out the terms of the agreement.

³ *Cal. Close Rolls, 1272-79*, p. 542; E. 368/53, m. 2. The first Durham coins bearing Edward's name were issued by Bishop Robert de Insula and except for the mint-name are indistinguishable from those of the

other mints.

⁴ This decision is somewhat surprising as a standard was sent to St. Edmunds in 1247, at the time of the introduction of the long-cross coinage, but probably reflects the king's desire to restrict privileges as much as possible.

⁵ Fox, *BNJ* vii (1911), p. 117. In 1283 a commission was appointed to find out who had falsified the dies delivered by the king (*Cal. Patent Rolls, 1281-93*, p. 97).

have allowed the monks to manufacture an irregular die. Finally, an entry in the Memoranda Roll clearly states that one die was delivered to the sacristan.¹

There is, however, another possible explanation. According to the Warden's accounts, Boniface, the assayer, went to St. Edmunds in November to make the assay there and 'to cut the dies'.² As assayer, Boniface would not be very familiar with this task of die-cutting and this would explain the poor quality of the workmanship.³ The big problem is why the Wardens felt it necessary to send someone to St. Edmunds instead of having the abbot exchange his old used die at the exchequer in London. The most likely reason is the need to save time. As the abbot possessed only one die, every time he returned the old one, his mint stopped working. Normally, when the mint was not busy, this would present no problem, but during the recoinage the abbot would probably require a new set of dies every week.⁴ By November 1279 the diemakers at London had had little time to prepare a stockpile of St. Edmunds dies, for they had been extremely busy. New dies for London were needed almost every day and mint officials even had to buy dies from Gerard of Ghent.⁵ Consequently it seems likely there were no spare dies for St. Edmunds and no available diemakers. Anticipating the abbot's continued demand for new dies, the Wardens, in a moment of panic, sent Boniface to St. Edmunds to make them. When the abbot did not begin minting, Boniface returned to London with the dies so that the abbot eventually received them from the exchequer and therefore did not question them. This theory, although conjectural, does explain why no further action was taken when a commission of inquiry was appointed in 1283. Presumably the commissioners discovered that the poor die was not the fault of the monks.

A general shortage of dies, however, was only one of several problems facing mint officials in 1279. The moneyers, for example, had difficulty making the coins fit the new standards. Master Albert, who seems to have replaced Hubert Alion de Asti,⁶ failed to cut 243 pennies to the pound, making on an average 242½. He also made £958 of farthings of which each pound weighed four farthings less than it ought to have done.⁷ Furthermore, when the first pyx of his work was delivered, the assayer found that £128. 14s. 11d. were deficient. By the time the second pyx was taken, he had improved, but still made £21. 9s. 2d. in weak coins. In contrast, his fellow moneyer, William de Turnemire, who minted far more money, was responsible for only £34. 19s. 3d. of poor money.⁸ Consequently, the king decided to dismiss Albert and place William de Turnemire in sole charge of his minting operations.

¹ E. 368/53, m. 2d.

² 'Ad cuneos talliandos' (E. 372/132, m. 3). The account records the expenses of Boniface going to St. Edmunds. Presumably the assay was for the money coined by the previous moneyer, Jocus the Goldsmith.

³ John Gyot, who succeeded Boniface as assayer, originally came to England to cut the dies, so the two jobs were not incompatible.

⁴ During the recoinage of pollards and crockards in 1300, new sets of dies were supplied to the ecclesiastical mints at Durham and York every five to ten days (Mavis Mate, 'Coin Dies under Edward I and II', *NC* 1969, pp. 213-15). There is no reason to suppose that the moneyer at St. Edmunds was not equally competent, for it is known that three dozen and three dies were delivered to the abbot of St. Edmunds between Sept. 1281 and Oct. 1283 (E. 372/132, m. 2), when

the pressure caused by the recoinage was almost over.

⁵ E. 372/123, m. 3.

⁶ Although Hubert Alion is described as one of the king's moneyers in the *Forma Nova Monete*, there is no record of him in the mint accounts. So, unless master Albert is simply a scribal error for Hubert, he must have decided at the last minute not to come. Master Albert was clearly in an inferior position, as he and his family received only 4s. a day for their expenses in Nov. and Dec. 1279, whereas William de Turnemire and his family received 9s. a day during the same period.

⁷ E. 372/123, m. 3.

⁸ The third moneyer, Peter de Turnemire, was wholly responsible for the issue of groats and there seems to have been no complaints about the quality of his work.

Turnemire's appointment carried with it a new title, Master of the King's Money, and new duties.¹ From 8 January 1280, he was to be responsible for making money in four places, London, Canterbury, Bristol, and York, with a master moneyer under him in each of the provincial mints. He was to pay all the expenses in these four places, and, in return, the king allowed him 7*d.* for each pound of old money minted and 5½*d.* for each pound of foreign silver. In addition he was to make the groat at the same rate and at the same terms as the penny, but, as it could be made more easily, any extra profit which accrued would be the king's. Farthings were now to be manufactured throughout England, not just in London, but, because of the extra labour involved in making them, Turnemire was allowed 10*d.* a pound for his expenses. With this new indenture the royal profit or seignorage increased still further. Previously, in 1279, the king had deducted 19*d.* from each pound of old money, of which 9*d.* was the seignorage,² and 10*d.* was for the cost of minting. Now, although Turnemire was to receive only 7*d.* a pound for minting, the deduction was kept at 19*d.* and the extra 3*d.* went to the king.³

William de Turnemire took this opportunity to introduce new minting techniques. In the past, square blanks had been cut from a sheet of silver and then hammered between the dies. Finally the correct-diameter coin was separated from its blank by means of a 'pastry-cutter'.⁴ Turnemire, however, started making the metal into circular rods, from which the correct number of lengths were cut and then beaten flat. But this method was not suited to making groat blanks,⁵ which were probably formed by pouring metal into flat-bottomed holes, thus making 'buttons' of the correct weight. Farthings and half-pennies, because of their size, could not be manufactured by either of these methods. The Warden's accounts, however, record the buying of basins and making holes in them for halfpennies and farthings.⁶ It therefore seems likely that these small coins were made by 'pouring the molten silver through a metal sieve with holes of the appropriate size, the drops thus produced falling directly into water where they solidified as odd shapes, but of fairly uniform weight'.⁷ Turnemire, therefore, appears to have introduced not one new method, but three different methods, one for each type of coin.

Another problem facing mint officials was the extensive work that had to be done at Canterbury before the mint could become operational. The buildings had not been used for over a year and before that they had been empty for a four-year period and little money had been coined there, so that both the equipment and the houses were inadequate. Two new furnaces had to be made in the foundry and existing buildings needed rebuilding and repairing. The further hall of the exchange, for example, needed new joists, new doors, new windows, and a new floor; the gutters on all the buildings had to be repaired and a new home had to be made for the dies. In addition two new exchequers were built, the hall received a new stove and the great chamber two new glass windows. Outside the exchange new gravel paths were made. A great deal of new equipment also

¹ There are two versions of this indenture with William de Turnemire. One in the *Red Book of the Exchequer* is printed by Johnson, *De Moneta*, pp. 59-61, the other is in the Warden's accounts on the Pipe Roll, E. 372/132, m. 3. The only significant differences are that the *Red Book* version does not mention the 5½*d.* deduction for foreign silver, and gives the mintage rate for farthings as 10½*d.* instead of 10*d.*

² 6*d.* for the traditional seignorage and 3*d.* from the

extra three pennies that were now cut from each pound of silver.

³ 'The king shall have of each pound (of farthings) as much profit as he will have of the common sterlings, to wit twelve sterlings' (Johnson, *De Moneta*, p. 61).

⁴ D. Sellwood, 'Medieval Minting Techniques', *BNJ* xxi (1963), pp. 57-65. See also Sir John Craig, *The Mint* (Cambridge, 1953), p. 413.

⁵ Ibid.

⁶ E. 372/132, m. 2.

⁷ Sellwood, *op. cit.*, p. 63.

had to be bought or made, for example, three new chests, wooden benches and reed mats for the benches, new balances, and eleven seats for the work of the moneyers.¹ In addition to this extraordinary expenditure the Wardens at Canterbury had to pay their regular expenses, which also cut into the royal profit. Thus, although £35,200 was minted at Canterbury between January and October 1280, and the king obtained £3,089. 11s. in revenues, he spent £1,087. 15s. 3½d. on expenses, and so received only £2,001. 15s. 8½d. profit.

At London, no structural alterations were required, but the mint needed extra equipment, such as sacks to keep the money in and extra men to supervise the coining and help with the exchanging.² In the foundry, for example, five keepers of the dies were employed between November 1279 and February 1280 and in the exchange two new clerks were appointed as well as two assistants for weighing and counting the pennies. Similarly four different men served as exchanger between June 1280 and April 1281, but they may not have all been working at the same time. Although the position of chief assayer remained in the hands of one man, Boniface Galgani of Florence, he had to send subordinates to take his place in each of the provincial mints. All these men had to be paid and nearly £200 was spent on wages alone between November 1279 and April 1281.

Obviously the moneyers already in the London mint could not cope with all the extra work, so both moneyers and workers were brought in from abroad. In 1279 nine men were sent to Canterbury and twenty were recruited for work at Bristol, and in the early months of 1280 another 191 workers and moneyers came to England.³ Later, nine more moneyers came from Spain, bringing their hammers and other tools with them. They may have replaced moneyers who fled, for many of the foreigners seem to have had trouble settling down.⁴ At Canterbury, for example, some of the moneyers escaped to Dover, but were captured there by Peter de Turnemire.⁵ Others may have quarrelled violently with their fellows, for Orlandino de Podio complained that great damage had arisen from the lack of workers and 'the danger of those who had come from abroad'.⁶ Clearly working conditions in the mints were unpleasant and may have been dangerous, as at Newcastle one of the moneyers was killed.

Because the king had to face such heavy expenses at both Canterbury and London, he increased still further the number of pennies that were cut from each pound of silver. From 1 January 1280, 245 pennies were to be minted to the pound.⁷ Yet a merchant bringing a pound of silver to the exchange would still receive 240 pennies, less the deductions made for the cost of minting and the king's traditional seignorage. The extra coins were a clear profit for the king and their value can be seen when the figures for 1279 and 1280 are compared.⁸ Between April and November 1279 just over £93,333 was minted, bringing in revenues of £7,303. 13s. 5d. Between May and October 1280 a similar sum was minted (£94,194), but the revenues were considerably higher (£9,298. 3s. 6½d.). In

¹ E. 372/132, m. 2.

² E. 372/132, m. 3d.

³ E. 372/132, m. 3.

⁴ One of the exchangers spent eighty days trying to track down moneyers who had escaped (E. 372/132, m. 3d).

⁵ E. 372/132, m. 2.

⁶ Letter from Podio to Thomas Bek, asking for workers to be sent to the mint (S.C. 1/30, no. 192).

This letter is undated, but must have been written between 1 Jan. 1280 and July 1281, when Orlandino de Podio gave up his wardenship of the Canterbury mint.

⁷ The mint accounts state that the pound of the exchange was increased by 2d. more than the ancient weight: 'quia libra cambii augmentata sunt de iid. ultra antiquum pondus pro maximis expensis quos Rex sustinet hoc anno occasione cambii' (E. 372/132, m. 2).

⁸ See Appendix A, Tables 1 and 2.

both cases the revenues from the mintage and seignorage were the same, but the extra profit came from the extra coins. This profit was used to pay the king's debts or to meet the expenses of the wardrobe. Between May and October 1280 about £2,000 in new money was paid to various creditors and over £5,000 of old money was used for household expenses.¹

To relieve the pressure on the London mint and to facilitate the exchange of new money, five provincial mints were opened in 1280. In each case, the king appointed prominent local citizens to keep the exchange, while leaving the mint under centralized royal control. At Bristol, Peter de la Mare, constable of Bristol castle, was made keeper of the exchange when it opened early in 1280.² At York, where the exchange had been set up in 1279, the keepers were John Sampson and John le Specer, who were both active in trade and had frequently served the city as mayor.³ These two mints had been included in the indenture with William de Turnemire, so he was responsible for meeting all their expenses. But, when, in the middle of 1280, two other mints were opened in Lincoln and Newcastle upon Tyne, the Wardens at London had to pay for the equipment, such as balances and basins, which they sent there.⁴ Finally, in December 1280, the last English provincial mint was opened at Chester to serve the marches of north Wales.

In the meantime the Irish mint had been running into difficulties. The mint, which had opened in 1276, had coined so little money in its first few years that the royal profit was negligible. The king, therefore, could only afford to hire a few officials and allowed the leading moneyer to act as Warden.⁵ But when the recoinage started in Ireland in May 1280 it became impossible for one man to handle the joint responsibilities of moneyer and Warden. The king, therefore, left the moneyer, Walter Unred, in charge of coining and appointed two new Wardens. One of them, Henry de Ponte, was a loyal and reasonably able royal clerk,⁶ but the other, James Donati, was a Florentine merchant and his appointment was probably intended to win the help of the Italian merchant houses in exchanging bad money for good and old money for new.

The Irish, however, were suspicious of the new money, which was called Bishop's money or *Stephening* from the name of the Treasurer, Stephen de Fulbourn, bishop of Waterford, for many people felt that the only person to profit from the recoinage was the bishop.⁷ So long as the old money was legal tender, few men wanted to exchange it by weight for the new and perhaps lose heavily if their coins were worn and clipped. Altogether only £3,175. 14s. 5d. was received and turned into new pennies between May

¹ These figures are taken from the Warden's account (E. 372/132, m. 3d), but additional confirmation can be found in the *Cal. Patent Rolls, 1272-81*, where there are many letters to the Wardens ordering them to pay sums of good, old, money to the master of the wardrobe 'with all speed as the king wants money for the expenses of the household'.

² Bristol had not been one of the cities granted an exchange in June 1279, so the Wardens sent £2,000 from London to set up the exchange there.

³ E. Miller, 'Medieval York', *The City of York, Victoria County History* (Oxford, 1961), pp. 30-46; *Cal. Patent Rolls, 1272-81*, pp. 396, 402.

⁴ E. 372/132, m. 3d.

⁵ Richard Olof, who was Warden and moneyer between June 1276 and May 1279 reported exchanging £115. 3s. 3d. in his last year of office, but, although he

received £36. 1s. 5d. in plates of silver from the bishop of Waterford and £10. 18s. 8d. in silver from the mines of Tipperary, he did not coin all of this. His successor, Walter Unred, who was Warden from 1 May 1279 to 30 May 1280, coined and exchanged only £170. 11s. 8d. in that time (E. 101/230/9).

⁶ In 1285 he held the joint positions of clerk of the Treasury and clerk of the justiciary. It was through him that 'the book called Domesday and other secret documents of the king were burned'. Later he became clerk to one of the chamberlains of the exchequer and finally, in 1292, a chamberlain himself (*Calendar of Documents Relating to Ireland*, ed. H. S. Sweetman (London, 1875), iii, pp. 3-4, nos. 710, 1084).

⁷ The original complaints are quoted by David Wilmer Dykes, 'The Coinage of Richard Olof', *BNJ* xxxiii (1964), p. 78.

1280 and February 1281.¹ Obviously the king and the London Wardens had expected more money to be minted, for during that time they sent eighty-two workers and moneyers from London to Ireland and seven new balances.² Orlandino de Podio also went to Ireland on several occasions, probably to see why the exchange was so slow, for on 15 August 1280 the old long-cross coinage had been finally demonetized and some of this money should have reached the mint.³

To try and bring more silver to the Irish mint Edward made several new appointments. In January 1281 Alexander Normanni of Lucca became Master of the Irish money, in charge of minting at both Dublin and Waterford.⁴ He replaced Walter Unred, who was mayor of Dublin as well as royal moneyer, and probably did not have the time or the experience to supervise a large-scale recoinage. Edward also chose Andrew de Spersholt, a burgess of Dublin, as Warden in place of Henry de Ponte, perhaps in order to keep the citizens of Dublin closely associated with the exchange.⁵ Finally the king promised to two merchants of Lucca all the profit arising from the exchange and mints of Dublin and Waterford.⁶ It was clearly in their interests to see that as much money as possible was brought to the mints.

As a result of all these changes, the recoinage began in earnest and large sums, including halfpennies and farthings, were minted. Alexander Normanni started work in March 1281 and two months later had received £12,344. 6s. 1½d.,⁷ which suggests that there was a backlog of silver waiting to be coined. Between March 1281 and June 1282 £28,377. 9s. 4½d. of pennies by number were coined, plus £1,299. 7s. 6d. of halfpennies and £1,757 of farthings, making a total of £31,433. 16s. 10½d.⁸ To this should be added the £2,000 minted at Waterford. What happened to all these coins? Mr. Dolley, from his study of coin-hoards, suggests they were not put into circulation, but were 'stock-piled' to meet the needs of the English economy.⁹ There is no documentary evidence, however, to support this thesis. Apart from a loan of about £2,000 made by the bishop of Waterford,¹⁰ the rest of the silver seems to have come from merchants and others who took their new coins away with them.¹¹ This £33,000, therefore, must have represented almost the total amount of money circulating in Ireland at that time, for little money was coined after 1282.¹²

¹ Account of Henry de Ponte and James Donati from 30 May 1280 to 24 Feb. 1281 (E. 101/230/9; E. 159/70, mm. 45, 46). The mintage rate on this money was 8d. a pound, a 1d. higher than the amount granted to William de Turnemire for minting old money.

² E. 372/132, m. 2.

³ After 15 Aug. no one was to use the old money in trade or take it out of the country. The Warden's account for 19 May to 18 Oct. 1280, contains a reference to the expenses of carrying letters of the king to the ports of England and other diverse places lest anyone cross with old money. The account between Apr. and July 1281 refers to the wages of one serjeant at Dover and one at Sandwich, keeping the port for twenty weeks, so that no one should cross with old money to parts beyond the sea. This prohibition against the export of old money and other silver seems to have been the result of a parliamentary petition (C. 49, File 1, no. 18).

⁴ *Cal. Patent Rolls, 1272-81*, p. 423.

⁵ Henry de Ponte continued to serve the mint as clerk of the rolls (E. 159/70, mm. 48, 54).

⁶ *Cal. Documents Ireland*, ii, no. 1790. The mint

accounts at Dublin do not record the amount of payments, if any, that were made to the merchants, but they received £500 from the mint at Waterford (*Cal. Close Rolls, 1279-1288*, p. 164).

⁷ *Cal. Documents Ireland*, ii, no. 1923.

⁸ These figures are taken from E. 159/70, mm. 48, 54. The total by number naturally exceeded the total by weight (30,710), as extra pennies were cut from each pound.

⁹ R. H. M. Dolley, 'The Irish Mints of Edward I in the Light of the Coin Hoards from Ireland and Great Britain', *Proceedings of the Royal Irish Academy*, vol. 66, section C (Dublin, 1968).

¹⁰ According to the view of the Warden's account taken in 1284 and recorded in the *Cal. Close Rolls, 1279-1288*, p. 164, the Wardens received £2,296. 11s. 4d. from the bishop of Waterford, but in E. 159/70, m. 54, the amount of the loan is described as £1,333. 6s. 8d.

¹¹ A list of the names of those who brought silver to the exchange can be found in E. 101/230/18.

¹² Between June 1280 and Sep. 1284 the Dublin mint produced £2,029. 12s. 10d. of pennies and £110 of

While the recoinage was just beginning in Ireland, it was ending in England. By the end of 1280 most of the clipped money had been reminted and the major expenses in setting up the new mints and exchanges had been met. Edward, therefore, was able to reduce the mintage rates and the amount of his seignorage. After 25 December 1280 William de Turnemire received $6\frac{1}{2}d.$ for minting each pound of old money, instead of $7d.$, and $8\frac{1}{2}d.$ a pound of halfpennies instead of $9d.$ The mintage rate for farthings, which had fluctuated from $10\frac{1}{2}d.$ to $11\frac{1}{4}d.$ was fixed at $10\frac{3}{4}d.$ ¹ Later, in February 1281, the number of pennies cut from a pound of silver was reduced from 245 to 243 and this became the legal standard. In this way the king gave up both his secret profit of $3d.$ and the increment of $2d.$ and so reduced his official seignorage from $12d.$ to $9d.$ ² Before this, a man receiving a pound by number at the exchange would have been given 240 pence. If he had taken it to the exchequer and had it weighed, it would have been regarded as underweight, as, of course, 245 pennies were minted to the pound. After February 1281 the king abandoned the extra increment of $2d.$ he had added in January 1280, and it was officially recognized that the pound contained 243 pennies instead of 240. From henceforth a merchant receiving a pound of silver at the exchange would be given 243 pennies. Thus the king received only $16d.$ instead of $19d.$ from each pound of old money and $14\frac{1}{2}d.$ from each pound of foreign silver. Edward's willingness to give up this profitable source of revenue proves his concern for the stability of the coinage.

The reduction in the charges made for the minting of silver had an immediate effect and encouraged the bringing of foreign silver to the mints and especially to Canterbury. Between October 1280 and March 1281 only £813 of foreign silver had been brought to the Canterbury mint, since foreign merchants were discouraged by the heavy charges for seignorage and mintage, but once these were reduced, silver began to pour in. Between 12 March and 3 May 1281, in just over six weeks, the amount of foreign silver doubled. The trend continued. Between May and September 1281 £15,936 was brought there and the following year £23,400 of foreign silver was minted at Canterbury compared with £1,688 of old money.³ Another possible explanation for this influx of silver was the good reputation of the new money. Merchants who had stayed away when the coinage was badly clipped and worn were now returning and bringing their silver with them.

When the recoinage was finally completed and the English currency had been restored to its traditional soundness, everything returned to normal. Several of the leading officials gave up their positions. In May 1281 the work of Boniface Galgani and William de Turnemire was judged satisfactory and the former gave up his office of principal assayer,⁴ which was taken over by John Gyot. By July Orlandino de Podio was no longer needed and on the 15th he rendered his final account before the council. His fellow Warden, Gregory de Rokesle, charged himself with all Orlandino's arrears and the king acquitted Orlandino and his heirs and executors of all that could be exacted from him on account of the exchange.⁵ One by one the provincial mints closed down. Minting stopped in halfpennies. Between Sept. 1284 and Sept. 1286 only £260 of pennies were minted (E. 159/70, mm. 48, 54).

¹ The rate for foreign silver remained unchanged at $5\frac{1}{4}d.$ A memorandum stating these changes can be found in the *Red Book of the Exchequer* (printed in Johnson, *De Moneta*, p. 88). It is dated 10 Feb. 1284 but from the Warden's account it is clear that the change took place in Dec. 1280, and the memorandum

therefore is only a record of an existing situation.

² E. 372/132, m. 3d. At Canterbury the change did not take place until Mar. 1281.

³ E. 372/132, m. 2.

⁴ *Cal. Patent Rolls, 1272-81*, pp. 448, 449.

⁵ *Ibid.*, p. 450. The king's letter to the barons telling them that Orlandino was no longer responsible for the arrears of either exchange is enrolled in the Memoranda Roll (E. 159/55, m. 2). This departure did not sever Orlandino's connection with mint affairs, for he later

the early summer and the Wardens rendered their final accounts in September and October.¹

The king received considerable revenue from the recoinage. By the end of 1281 he had made £18,219 clear profit at London, after all his expenses had been paid.² This was a substantial sum, but nowhere near the £35,000 estimated by Sir John Ramsay, who was probably misled by the large sums borrowed by the king to make the exchange.³ At Canterbury, the king had received nearly £2,000 profit by October 1280. If the archbishop of Canterbury had been given his customary three-eighths of this profit during this time, he would have received just over £750, whereas by the terms of the indenture with Gregory de Rokesle and Orlandino de Podio, he was able to be paid only 1,000 marks between November 1279 and November 1282. Consequently the archbishop seems to have regretted his decision and on 24 June 1280 demanded the restoration of his dies, which were not apparently returned to him until the following November.⁴ He therefore claimed compensation for the revenue he had lost during this enforced wait and was eventually promised both the 1,000 marks and £160 in compensation.⁵ But, according to the mint accounts,⁶ the archbishop did not start receiving his share of the profit from the Canterbury mint until after November 1282, the original date of the ending of the indenture. If he was made to wait until 1282 for the return of his dies, then the king gained considerably from the agreement, for between January 1280 and November 1282 he made £3,836. 5s. 3½d. profit.

Besides bringing in welcome revenue, the recoinage did restore the stability of the currency. Nearly all the worn, clipped money was withdrawn from circulation and replaced with new money, carrying a basic design that was to remain unchanged for two centuries. The issue of round halfpennies and farthings effectively discouraged the illegal cutting of coins by private individuals. With confidence in the royal currency restored, it was no longer necessary to stipulate payment in 'good money' for goods and debts. Prices fell (see Fig. 1), and did not rise again even when the Welsh war was renewed in 1282-3. The purchase price of oxen, for example, which had reached 13s. 11¾d. in 1278, had fallen to 10s. 10½d. by 1280 and the sale price of oxen had dropped from 12s. 3½d. to 9s. 1¼d. Similarly, the price of cheese dropped from 11s. 0½d. to 9s. 9d. and the price of pigs from 3s. 9½d. to 2s. 9½d.⁷ Finally, merchants who had been staying away from England on account of the poor reputation of its currency, began to bring their silver to the exchange once more.

IV. NEW PROBLEMS

If Edward had hoped to solve his monetary problems with the recoinage and the severe punishment of the Jews, he was to be disappointed. The new English money, went to Gascony with William de Turnemire to take charge of the manufacture of new money there (*Rôles Gascons*, ii, 1290-1307, ed. Charles Bémont (Paris, 1906), nos. 1196, 1301, 1302, 1512).

¹ E. 372/132, m. 3d. *Cal. Patent Rolls, 1278-81*, p. 460. From an undated letter in the Ancient Correspondence, it seems as if the exchange at Lincoln closed down too soon and that many men had old money which they were able neither to use nor exchange (S.C. 1/31, no. 207).

² See Appendix A.

³ J. H. Ramsay, *History of the Revenues of the Kings of England, 1066-1399* (Oxford, 1925). The £20,300

borrowed from the Italian merchants had to be repaid and cannot be included in the profits of the recoinage.

⁴ *Cal. Inquisitions Miscellaneous*, i, no. 1288.

⁵ E. 159/58, m. 2; *Cal. Chancery Warrants, 1244-1326*, p. 11.

⁶ E. 372/122, m. 2.

⁷ D. L. Farmer, 'Some Livestock Price Movements in Thirteenth-Century England', *Economic History Review*, 2nd ser. xxii (1969), pp. 1-16. This short-term fluctuation in prices, caused by the temporary circulation of bad money, did not affect the general long-term rise in prices caused by the pressure of population in the thirteenth century.

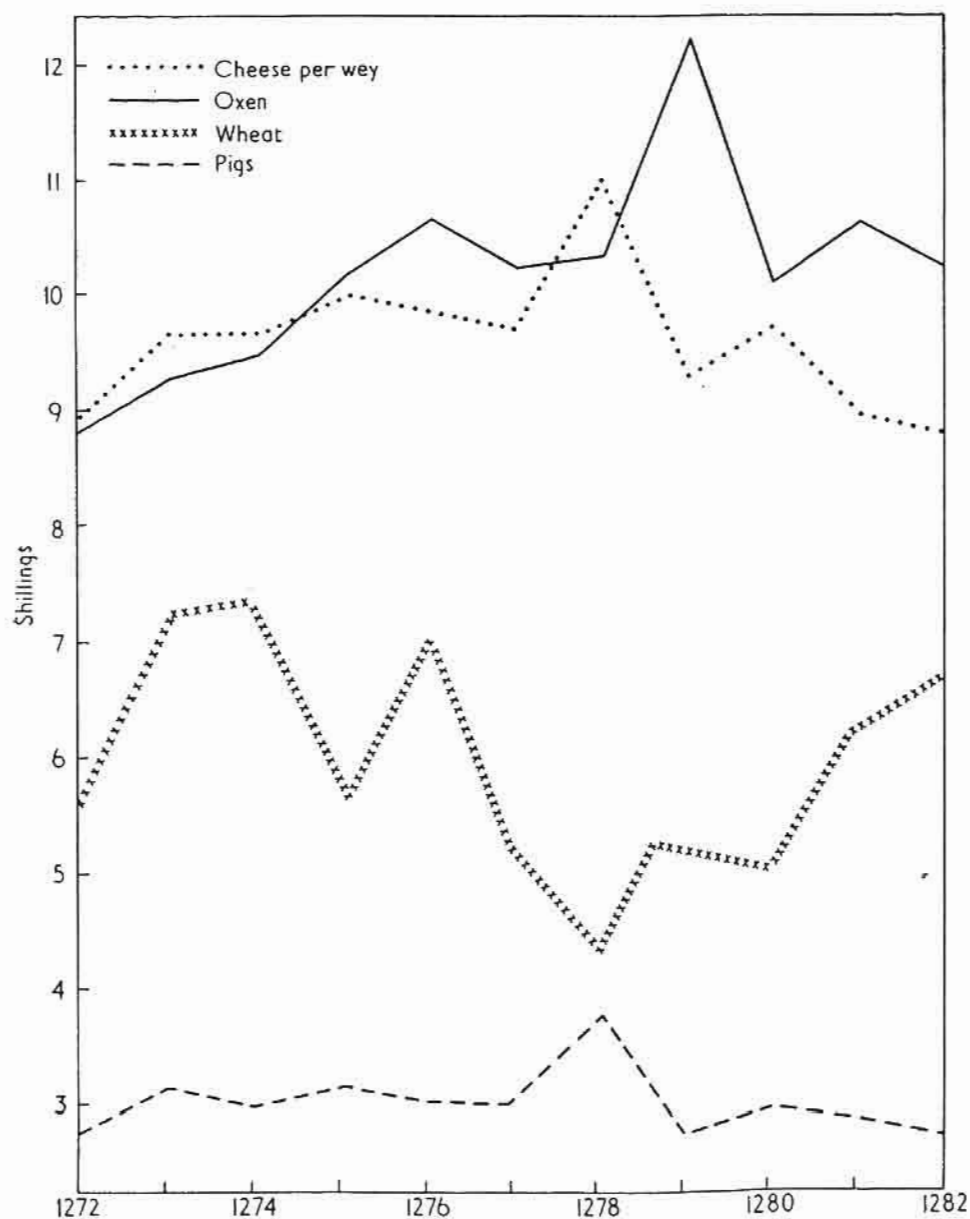


FIG. 1. Selling price of oxen, cheeses, pigs, and wheat, 1272-82.

because of its purity and stability, was acceptable anywhere on the Continent.¹ Consequently many foreign merchants, who brought silver or goods to England, took the English coins they received out of the country instead of using them to buy English goods. Edward, therefore, in 1283 forbade the export of English money. But this act encouraged foreign princes to manufacture their own 'imitation' English coins, of lesser weight and fineness, but easily mistaken for English coins by the unwary, and, of course, accepted at the same rate as true English money. After a while these foreign imitation sterlings found their way into England to the disruption of the English monetary system. Furthermore, clipping continued and men began to coat copper or tin with a thin layer of silver and pass it off as pure silver.

The trade in false plates of silver flourished until the expulsion of the Jews, despite repeated royal efforts to suppress it.² There was simply not enough good silver to satisfy the needs of goldsmiths and merchants, who, therefore, went to the Jews and offered to buy plates made of coin-clippings or inferior metal.³ The Jews were thus continually encouraged by the ready sale of their products and not deterred by the minimal fines imposed on those who were caught.⁴ Moreover, guilty foreign merchants were often pardoned at the request of their prince.⁵ Consequently, even though the royal commissions against clipping and the manufacture of false sheets of silver continued to function, the trade also continued and it was only the forcible removal of the Jews that finally brought it to a standstill.

Edward also waged an unending and unsuccessful battle against the importation into England of clipped and counterfeit foreign money. In 1283 he appointed John de Bourne to make sure that all ships arriving at Dover and Sandwich were searched for false or clipped money.⁶ Bourne, however, disregarded the licenses issued by the Warden of the exchange, Gregory de Rokesle, and arrested all bad, foreign money coming in, regardless of whether the owner intended to bring it to the mint or use it elsewhere.⁷ Although the merchants eventually recovered their money, it took some time, and the Warden of the exchange was afraid that these delays would prove damaging to the exchange and stop or check the flow of foreign silver to the mints. Furthermore, merchants, knowing that a search was being made at Dover and Sandwich, avoided those ports and went to London or some of the east-coast ports if they wished to bring in bad money. Other, more efficient methods of dealing with the problem were clearly needed.

In 1284, therefore, Edward introduced new preventive measures. He restricted entry to the major ports of Dover, Sandwich, London, Boston, and Southampton, where he posted officials to search all money and merchandise for hidden, counterfeit coins. At the same time he published a list of articles describing in great detail the different kinds

¹ Sterling was used as an international currency. In 1282, for example, an alderman of Cologne lent the count of Gelders 300 marks sterling. Many foreign merchants also paid English merchants in sterling for goods that they had sold abroad. For examples, see Claud Richebé, *Les Monnaies Féodales d'Artois* (Paris, 1963), pp. 121-3.

² Commissions to arrest and punish the guilty were appointed in 1283 (*Cal. Patent Rolls, 1281-92*, p. 56) and 1284 (*ibid.*, pp. 128, 134).

³ *Select Pleas, Stairs, and other Records of the Jewish Exchequer, 1220-84*, ed. J. M. Rigg (Selden

Society, 1901), pp. 125-7.

⁴ Only £31 was collected from merchants found guilty of exchanging false plates between 1284 and 1289 (E. 101/119/12; E. 101/119/20).

⁵ *Cal. Patent Rolls, 1281-92*, p. 187.

⁶ *Ibid.*, p. 86.

⁷ In 1285, for example, he arrested £9. 5s. 10d. of Brabantine money that a merchant of Bruges planned to take to the Canterbury mint (E. 159/58, m. 7d). Later, he arrested 1,247 pounds of Brabantine pennies that two members of the Mozzi society intended to exchange at the London mint (S.C. 1/30, no. 202).

of false money and pointing out the 'damages and perils' which were threatening the money of England.¹ He also put Gregory de Rokesle in charge of enforcing these new measures. But when Rokesle's men arrived at Dover and Sandwich, the bailiffs of John de Bourne chased them away. Gregory, already angry with Bourne for his indiscriminate arrests, then wrote a bitter letter, demanding that his men be allowed to work without hindrance, and asking that John de Bourne be ordered to stop arresting merchants who were bringing silver and money to the royal mints.² Rokesle's demands were granted. Bourne was dismissed and he was left in charge. He stationed four men with their servants at the four major ports of Dover, Sandwich, London, and Boston, with orders to arrest all false money that they found.³

Edward's concern was justified, as there is clear numismatic evidence for the manufacture of imitation sterlings throughout the Low Countries.⁴ The movement began in Brabant, probably in 1283, when Duke Jean I issued coins of the same weight and alloy as the new English coins and with the same cross on the reverse, but with a lion in a triangular shield on the obverse instead of the king's face. These coins were then imitated by his neighbours, who were less scrupulous about maintaining the fineness of the coins and usually made them of light weight and poor silver.⁵ Yet these coins were at least clearly distinguished from English ones. But, starting about 1290, Gui de Dampierre, as count of Namur, issued a new type of coin, identical with the English sterling except that the king's head was bare instead of being crowned. Later, the duke of Brabant thought of putting a garland of roses around the king's head and other princes followed his example.⁶ Many of these coins, both bare-heads and those crowned with roses, were honest imitations of approximately the same weight and fineness as the English coins and with the name of the mint-town on the reverse. But there were other coins that were the work of unknown moneyers with deliberately illegible inscriptions and made of poor silver. Eventually much of this money, both the genuine 'leonines', 'bare-heads', and *rosarii*, and their poorer imitations, found its way into England.⁷

Merchants who wished to bring bad money into the country simply landed at places where there were no searchers. So, in 1289, the king decided to reissue the articles and provisions of 1284 and have them enforced in all the Irish ports, as well as nine other important English ports, including Bristol, Hull, and Newcastle upon Tyne.⁸ But the

¹ The original version of these articles and provisions can be found on the Patent Rolls, C. 66/103, m. 5, on a schedule. They are printed and translated in *Statutes of the Realm*, i, p. 219.

² S.C. 1/30, no. 202. Undated letter from Rokesle to John de Vescy and William de Louth.

³ They were first appointed at Easter 1285 and worked for the next five years (E. 372/135, m. 1). There is no record of how much money they found.

⁴ J. Chautard, *Imitation des Monnaies au Type Esterlin frappées en Europe pendant le xiii^e et le xiv^e siècle* (Nancy, 1871).

⁵ Ibid. See p. 427 for a complete list of princes issuing coins of this type 'with a lion'.

⁶ The major princes issuing *rosarii* were Gui de Dampierre in Flanders and Namur, Jean d'Avesnes of Hainault, Florence of Holland and the bishops of

Cambrai and Liège, but there were many others. For a full list see Chautard, op. cit.

⁷ The Broughton hoard, which was deposited about 1290, contained five continental sterlings: two issued by Gui de Dampierre, count of Flanders, two issued by Jean II d'Avesnes, count of Hainault, and one issued by the count of Gelders. For a full description of them, see J. J. North, 'The Broughton Hoard', *BNJ* xxxv (1966), pp. 120-8.

⁸ *Cal. Patent Rolls, 1281-92*, p. 313; *Cal. Close Rolls, 1288-96*, p. 9. It is not clear from the printed calendars that the remedies and articles referred to in 1289 were, in fact, the same as those originally promulgated in 1284, but this is quite obvious from a comparison of the original letters (C. 66/103, m. 5; C. 54/106, m. 7).

large number of merchants found guilty of bringing in clipped and counterfeit sterlings in the spring of 1291, clearly showed that the measures of 1284, with their vague threat of loss of life and property, were not acting as a deterrent.¹ New clearly defined penalties were required. Consequently in the autumn of 1291 Edward issued new regulations and insisted that every sheriff publicly proclaim them.² Under the new terms no one was allowed to bring clipped or counterfeit money into the kingdom or to use it in trade within the country. Anyone found guilty the first time, lost all his bad money, but if he were caught again in a similar offence, he lost not only the money, but all other goods found with him. If anyone committed the same offence a third time and was caught, he was liable to lose his life as well as his goods. People who were not merchants but had clipped or counterfeit coin in their possession were asked to pierce it and to bring it to the royal exchange to be reminted.³ Edward, in passing this legislation, had two aims. He wanted to prevent the further importation of false money, but he also wanted to remove all existing bad money from circulation.

So from 1291 to 1294 the king and his council made a determined effort to prevent the distribution and use of light, counterfeit money within England. In 1292 William de Wymondham, the new Warden of the exchange,⁴ visited the fairs of St. Ives, Royston, and Boston, and, with his assistants, examined all the money that was used there. He uncovered about £77 of bad money.⁵ Wymondham also appointed one man to check the coins of everyone who crossed London Bridge and another to search all ships, bales, and bundles in London for false money.⁶ In addition the king sent one of his clerks, John de Gloucester, to Dover and Sandwich to examine both the money arriving from abroad and that already in circulation.⁷ Gloucester discovered large quantities of black *tournois* which he arrested, despite the opposition of the mayor of Sandwich.⁸ He also found a variety of other foreign money and, as a result of his efforts, 119 merchants forfeited some of their money between Michaelmas 1291 and Easter 1292 and another nineteen

¹ E. 101/301/4 contains a list of eighty-eight names of foreign and native merchants whose money was arrested during Easter term 1291. E. 401/1784 gives not only the names of the 114 merchants, many of them Flemish, who were found guilty during that term, but also the amount of clipped and counterfeit coin they had with them. Some of this money was later restored to the merchants, at the request of the count of Flanders.

² On 23 Sept. 1291, the king wrote to the Treasurer and barons of the exchequer asking them to send orders to the sheriffs to make the necessary proclamations (*Cal. Close Rolls, 1288-96*, p. 203; E. 159/65, m. 3d). On 4 Oct., therefore, the Treasurer, William de March, sent letters to all the sheriffs (E. 368/63, m. 31; E. 159/65, m. 44).

³ R. H. M. Dolley in 'An Interesting New Variety of the Late Thirteenth Century Sterling of Namur', *BNJ* xxviii (1958), describes a coin which appears to have been pierced in accordance with the terms of this statute. The coin, issued by Gui de Dampierre about 1285, was defaced and mutilated by a sharp instrument, probably the point of a knife, so that the legends were almost illegible.

⁴ On the death of Gregory de Rokesle in July 1291,

Wymondham was chosen to succeed him by William de March, the Treasurer, as a temporary appointment. He was not formally appointed as Warden until 5 May 1292, the day he was asked to supervise all trade within the country (E. 372/144, m. 26; E. 368/63, m. 37d).

⁵ E. 401/1782; E. 101/119/23. This figure may be too high, as the amounts recorded on the Receipt Roll (E. 401/1782) are considerably higher than those mentioned in Exchequer Miscellaneous E. 101/119/23, but this latter account could well be incomplete.

⁶ Both men were paid 3d. a day. All the money they arrested was examined at the London exchange and the moneyers received an extra 30s. for this work (E. 101/288/26). In the receipt roll for 1291/2 there is a note that £10. 10s. of money of Flanders was discovered among the money examined at the Tower.

⁷ He received 100s. for his expenses (*Issues of the Exchequer, being a collection of payments made out of His Majesty's Revenue from King Henry III to King Henry VI inclusive*, ed. Frederic Devon (London, 1837), p. 106).

⁸ The mayor spent some time in prison and was fined £100 for his obstruction of Gloucester's work, although he was eventually pardoned (E. 159/67, m. 2d).

had lost money by the end of Easter term.¹ Finally, the king, perhaps on the advice of his Treasurer, William de March, instituted a check on all money paid at the exchequer by sheriffs, bailiffs, collectors of taxes, and others.²

Even though the amounts of bad money forfeited were often quite small,³ it was clear that more poor money was circulating than was actually arrested.⁴ Consequently the measures of 1291/2 were continued and expanded during the next two years. John de Gloucester continued to examine all the money circulating at Dover and Sandwich. Money from merchants was also being examined at the Tower of London and all receipts from sheriffs and others at the exchequer were carefully checked.⁵ Although William de Wymondham did not personally tour the fairs in 1293, he sent five men to guard the entrances and exits of the fair at Boston for four weeks, and he still paid the wages of a man at London to search for false money there.⁶ He also sent two other men, John de Basing and Richard de Eu to various cities, towns, and fairs throughout England to arrest all clipped and counterfeit money they found.⁷ But the task of overseeing buying and selling throughout England was an impossible one for just two men, so, on 20 May 1294, the king granted similar commissions to John de Gloucester and John de Lincoln, a merchant of Hull.⁸

This flurry of activity which characterized the years 1291-4 did uncover just over £1,000 of poor money,⁹ but much money was also driven underground. For rather than risk forfeiting their clipped and foreign coins, men began to bury them, in the hope, no doubt, of being able to use them later, once the king's vigilance had relaxed.¹⁰ Other men gave them to churches and abbeys for safekeeping. To try and uncover this money the king, on 16 June 1294, appointed two men in each county to scrutinize all monastic deposits and to arrest any clipped and false money that they found.¹¹ As a result nearly

¹ E. 101/301/4 lists their names, but unfortunately does not give the amounts that they lost. In the Receipt Roll for 1291/2, however, there is a note that the Italian society of the Amanati forfeited £12. 14s. 10d. of counterfeit money and £7. 10s. of clipped money out of a total of £42. 7s. (E. 401/1783). In 1293 Gloucester handed over to the chamberlains of the exchequer 28s. 10d. of counterfeit money, 10s. 2d. of *parisis*, £22. 18s. 10d. of black *tournois* (E. 401/1787).

² E. 401/1782 and E. 401/1783.

³ Only 2s. out of the £280 paid in at the exchequer by the collectors of the fifteenth in Middlesex (ibid.).

⁴ In 1293, for example, when the goods of Richard of Cornwall, sheriff of Kent, were taken into the king's hands on his death, it was found that he had 25s. 8d. of clipped money (E. 159/67, m. 11d). If he had not died at this time the money might never have been discovered.

⁵ The following amounts of bad money were discovered:

Michaelmas term 1292/3	£69. 11s. 5d.	E. 401/1786
Easter term 1293	£84. 10s. 5d.	E. 401/1787
Michaelmas term 1293/4	£71. 17s. 9d.	E. 401/1789

⁶ E. 101/301/5.

⁷ Ibid. They worked from 13 June until Michaelmas 1293 and received £16. 16s. in expenses. Their letters of appointment can be found in E. 159/66, m. 28.

⁸ E. 159/67, m. 38d; E. 368/64, m. 44d. The appointment is printed in full in T. Madox, *History and Antiquities of the Exchequer* (London, 1711), i, 293-4.

⁹ By the end of 1294 £1,020. 6s. 8d. had been paid into the exchange. The total by weight was £1,007. 14s. 9d., so that most of it probably was counterfeit rather than clipped money (E. 372/144, m. 26).

¹⁰ In 1295 when the chattels of John de Biry were scrutinized, 60s. of *gros tournois* were found hidden in the ground (E. 159/68, m. 31). The Dover hoard, which was clearly deposited before 1300, contains fifty-four foreign coins, most of them French, and was probably hidden to escape the scrutinies of John de Gloucester. For a full description of the Dover coins, see R. H. M. Dolley, 'The Dover Hoard, the First English Hoard with Groats of Edward I', *BNJ* xxviii (1955), pp. 147-65.

¹¹ *Rôles Gascons*, iii (1290-1307), ed. Charles Bémont (Paris, 1906), pp. 143-5. Sir Maurice Powicke, in *The Thirteenth Century* (2nd edn., Oxford, 1962), pp. 670-1, correctly linked the scrutiny of the deposits with the king's desire to enforce his statutes of money. This connection has since been denied by Michael Prestwich, 'Edward I's Monetary Policies and Their Consequences', *Economic History Review*, 2nd ser. xxii (1969). But it is quite clear from the Gascon Rolls that the king's initial concern in searching the deposits was to uncover bad money, even though he later

£300 of poor money was forfeited in Easter term 1294, most of it being found in the possession of priors and convents.¹

Throughout these years every effort was made to see that all the provisions of the statute of 1291 were enforced. Names of merchants who had been found guilty were circulated so that they could not escape the consequences of being found guilty a second or third time by going to different ports.² A good example of the care taken to find repeated offenders is the case of the two different merchants with the same name, Giles of Brussels. In 1292 the first merchant forfeited some poor money at Boston. The following year the other merchant arrived at London and royal officials thought he was the same man who had earlier been found guilty at Boston, so they confiscated all his money.³

As well as appointing special officials to watch for poor money, the king asked the collectors of the custom to check all the money they received. Unfortunately the Italian merchants, who were farming the customs, did not render detailed accounts to the king, so that it is impossible to find out how much bad money they collected. But in 1294 local royal officials replaced the Riccardi as collectors of customs. These new men accounted to the king for all money received, including bad money. Sometimes the amount they collected was quite small, which could indicate that the royal concern was unjustifiable, or could simply mean that merchants were avoiding that port or that the collectors were not as scrupulous as they should have been. At Hull, for example, in 1294-6, the collectors found only 27s. 10d. of counterfeit coin out of a total receipt of £10,802. 10s. 1d.⁴ Whereas at Newcastle upon Tyne during the same period the collectors uncovered £30. 12s. 7d. in a total revenue of only £252. 9s. 7d.⁵ Certainly the outbreak of war in 1294 and the subsequent increase in customs duties led to a decline in trade, so it is not surprising that the amounts of bad money discovered at the ports should drop after 1295.

Not all bad money circulating in England came from abroad. Some of it was manufactured at home. The making of false money was indeed almost a recognized profession. When Gregory de Rokesle, for example, was examining the case of two false moneyers in the eighties, he was told by one that the other had been his master and had taught him the trade and that they both belonged to the society of false moneyers.⁶ But quite often false money was made secretly by otherwise respected citizens, such as a chaplain of the hospital of St. Thomas outside Marlborough and a burgess of the town.⁷ They were in a good position to dispose of the coins that they made and were, no doubt, encouraged by the trend towards money payments.⁸

The volume of money in circulation in Europe was greater at the end than at the

became tempted by the size of the deposits to seize some for his own use.

¹ E. 401/1790. This sum includes the £8. 8s. arrested by John de Gloucester in the north.

² E. 101/301/4 is a good example of such a list.

³ He had 3s. 9d. of clipped money and 5s. 10d. of counterfeit money out of £100. Later he was able to prove his separate identity and his good money was restored to him. His case is discussed on a separate schedule attached to the side of E. 401/1787.

⁴ Charles Frost, *Notices Relative to the Early History of the Town and Port of Hull* (London, 1827), pp. 109-10.

⁵ J. Conway Davies, 'The Wool Customs Accounts

for Newcastle on Tyne for the Reign of Edward I', *Archaeologia Aeliana*, 4th ser. xxxii (1954).

⁶ S.C. 1/31, no. 26.

⁷ The two men fled before royal officials could arrest them, but as an iron instrument and fused metal were found in their homes, their guilt seems fairly certain (E. 159/67, m. 62d).

⁸ All ranks in the army, including the Marshal, began to receive pay under Edward I, instead of serving at their own expense (A. Z. Freeman, 'The King's Penny; the Headquarters Paymasters under Edward I, 1295-1307', *Journal of British Studies*, vi (1966), pp. 2-3).

beginning of the thirteenth century. At the same time, some of the most productive silver mines in central Europe were becoming exhausted.¹ The shortage of silver was not yet as acute as it became in the fourteenth century, but there are clear signs that it was beginning. In 1284, for example, the count of Holland, unable to find sufficient silver on the Continent, sent to England and bought £960 of silver.² Much of the new silver that was minted was shipped directly to North Africa from ports such as Montpellier and Genoa.³ Consequently when silver was brought to the English mints to be turned into English coins, it had usually been already minted into foreign coins. Quite often these new English coins would then be exported, and, in time, turned into Brabantine or French coins, which might eventually find their way back into England, so that the same piece of silver could be minted and reminted a dozen times in almost as many years. As a result, when silver flowed into England, there was usually a shortage elsewhere. Conversely when there was a demand for silver on the Continent, there was a shortage in England.

This interdependence of England and the Continent shows up clearly in the 1280s and 1290s. By 1280 the trade in counterfeit Muslim coins, known as *millarès*, had virtually ceased,⁴ releasing silver for use elsewhere. Attracted by the stability of the new English coinage, merchants brought large sums of foreign silver to both London and Canterbury. For example, between August 1286 and November 1287 over £61,084 of foreign silver was minted at the London mint and £43,197 at the mint of Canterbury. But this was the peak of the movement and thereafter the supply of foreign silver began to drop rapidly. Thus between November 1288 and July 1290 only £16,153 was received at the London mint and £5,956 at the Canterbury mint.⁵ The king, therefore, reduced his seignorage on foreign silver from 9d. to 6d. in the hope of reversing the trend.⁶ The reduction, however, had absolutely no effect and the supply of foreign silver dwindled still further.

There are several possible reasons why merchants stopped bringing silver to England after 1287. Some were probably discouraged by the activities of John de Bourne and other royal searchers at the ports, who were not as discriminating as they should have been in their quest for clipped and counterfeit coin. Others found a better market for their silver. It was about this time that princes such as the duke of Brabant and the count of Namur began to manufacture their own imitation sterlings. To do this they needed to obtain silver from somewhere and naturally sought to attract it from men who had previously taken it to England. Since merchants received more imitation sterlings for each pound of silver than genuine English coins, it is small wonder that they began to patronize continental rather than English mints. Finally, in 1290, the French king increased the nominal value of the *gros tournois* from 12 deniers to 13½ and so attracted more silver to the French mints.⁷ As the continental mints became busier, less silver was available for England.

Edward became increasingly concerned about this shortage of silver and the subsequent decline in mint revenue, which was often not enough to cover his expenses.⁸ At London, for example, between July 1290 and September 1291 only £1,219 of foreign

¹ J. U. Nef, *Cambridge Economic History*, ii.

² This silver was arrested, and there is no record of whether Edward allowed it to be exported or not. Rymer, *Foedera*, i. ii. 646.

³ A. M. Watson, 'Back to Gold and Silver', *Economic History Review*, 2nd ser. xx (1967), pp. 15, 16.

⁴ A. M. Watson, *op. cit.*, p. 35.

⁵ See Appendix A, Tables 1 and 4 and Fig. 2.

⁶ The total deduction on foreign silver was thus reduced from 14½d. to 11½d. (E. 372/136, m. 29).

⁷ Jean Lafaurie, *Les Monnaies des rois de France* (Paris, 1951).

⁸ See Appendix A, Tables 2 and 5, for a full list of revenues and profit received at both London and Canterbury.

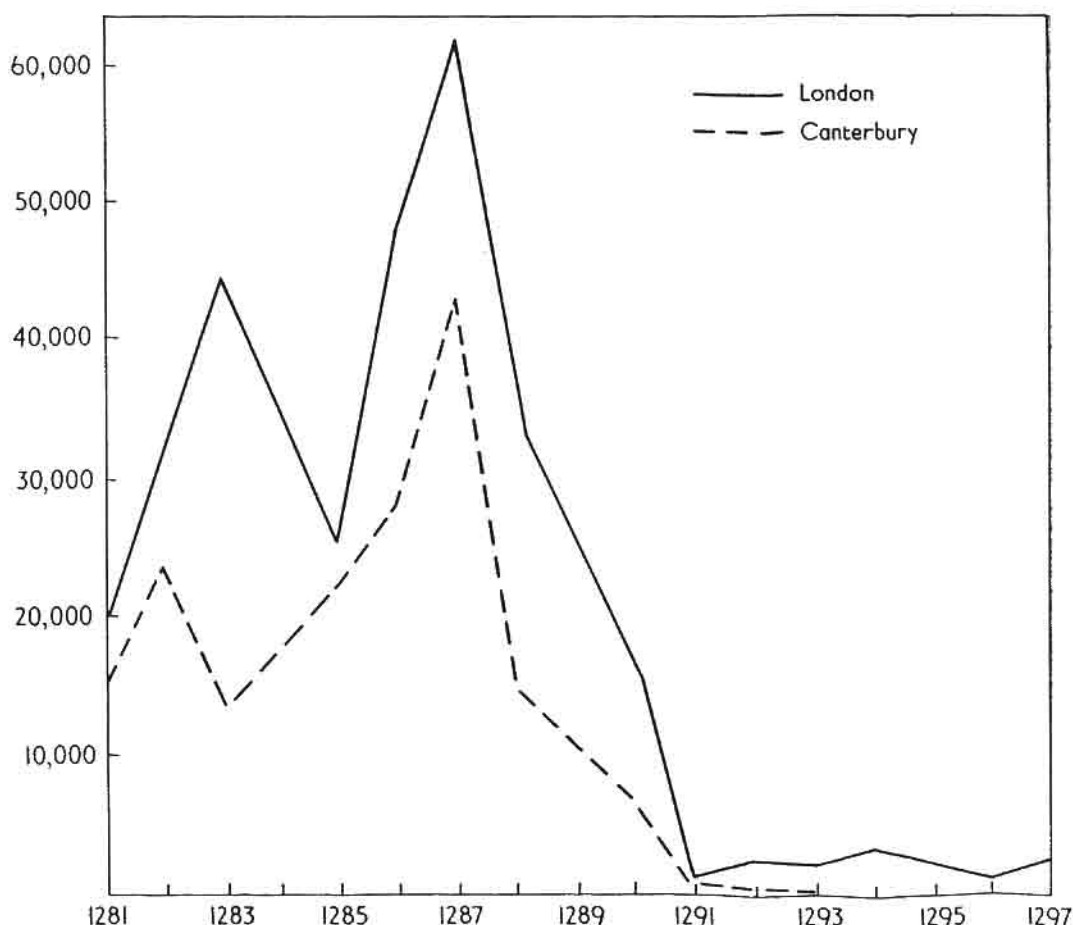


FIG. 2. Importation of foreign silver, 1281-98.

silver was minted, bringing in £137. 10s. $\frac{1}{4}$ d. in revenues. This paid the cost of minting, but there was not enough left to pay the wages of the porter or the comptroller and, of course, little or no profit for the king. At Canterbury the situation was even more serious and the mint was forced to close from 1296 to 1299 as so little silver was being brought there. With little foreign silver available, Edward tried to exploit English resources and in May 1292 sent Vincent de Hilton to dig and seek mines of lead and silver in Devon.¹ Everything possible was done to expedite the work of the Devon mines,² yet the results were disappointingly small. £1,246. 8s. 3d. of silver was sent to London in 1296³ and £1,110. 5s. 2d. in 1297.⁴ Though welcome, these sums were insignificant compared with the £61,000 of foreign silver which had been received in 1286.

¹ E. 368/63, m. 38d.

² The tax collectors in Devon, Cornwall, and Somerset paid all the money they received direct to the mines and 260 miners were sent from the mines of Derby to Devon (E. 159/69, mm. 67d, 79d; E. 159/71, mm. 98, 112).

³ When this silver was brought to the exchange, the assayer, the Master of the Money and the Warden were asked to assess its value. They all gave different answers. Eventually a compromise was reached and the silver was assessed at 20s. 3d. a pound (E. 159/69, m. 27; E. 372/144, m. 26).

⁴ E. 372/144, m. 27.

The outbreak of war with France in 1294 made a bad situation even worse, for the merchants of France and her allies, who, in peacetime, might have brought silver and merchandise to England, now stayed away rather than risk the confiscation of all their goods.¹ Other merchants may have been discouraged by the increase in the customs duties to help pay for the war. Faced with the prospect of paying 3 marks duty on each sack of wool exported, men who might have brought silver to England in order to buy wool, decided to trade in other merchandise elsewhere. In addition the king was sending large sums of English money to Germany and the Low Countries in the hope of winning the support of the princes there. People who were anxious to acquire English currency because of its stability no longer had to go to England to get it, since large quantities were circulating on the Continent.² Finally, in April 1295, the French king devalued and seriously weakened the French coinage. At the same time he prohibited the export of gold and silver without a licence. In this way he hoped to, and did, attract to the French mints, silver which might otherwise have been taken to England.³

The war, followed by the Welsh rebellion, the constitutional crisis, and trouble with Scotland also limited the effectiveness of Edward's campaign against bad money. Royal officials were needed for other tasks. John de Gloucester, for example, who had been used so often in searches for clipped and counterfeit coins, was sent, in the spring of 1296, to Caernarvon with money for the works there and, in the autumn, to Portsmouth to receive the grain being sent there *en route* to Gascony.⁴ Edward did not rescind his earlier statutes against the importation and use of bad money, but he no longer had the time to see that they were vigorously enforced. Local officials were left without the prodding that they needed if they were to function efficiently. Bad money which had been buried could be unearthed and used without fear of forfeiture. Furthermore the trickle of false coins into England became a flood, as men who had been fighting in Gascony and Flanders returned bringing money from the Continent with them. Eventually imitation sterlings, both the bareheads and the *rosarii*, became so commonplace in England that they were known familiarly as 'pollards and crockards'. Men registering debts once more needed to specify that they should be repaid 'in good and lawful sterlings'.⁵ By 1298, in fact, drastic measures were needed to restore the soundness of the English money.

V. POLLARDS AND CROCKARDS

In May 1299 Edward, free to return to monetary problems, issued new orders.⁶ He tried to prevent the export of English coin and the further importation of pollards and crockards by appointing keepers of the sea coast to search the goods of everyone who

¹ In the autumn of 1294 several foreign ships loaded with horses and armaments were forced into northern ports for shelter. The king ordered the ships to be attacked and their goods to be unloaded and sold, until he discovered that the ships did not belong to Frenchmen, but Germans. Then he rescinded the order (J. Conway Davies, 'Shipping and Trade in Newcastle upon Tyne, 1294-9', *Archaeologia Aeliana*, xxxi (1953), pp. 175-86). The royal clerk who was sent to the north and put in charge of this operation was John de Basing, who had earlier been appointed to supervise payments in fairs and markets.

² Between 1294 and 1298 over £165,000 was paid in subsidies to foreign allies. In addition large sums were sent to Gascony to pay for troops and supplies there. For full details see M. C. Prestwich, 'Edward I's Monetary Policies and Their Consequences', *Economic History Review*, 2nd ser. xxii (1969).

³ A. Grunzweig, 'Les incidences internationales des mutations monétaires de Philippe le Bel', *Le Moyen Age*, 4th ser. viii (1953).

⁴ E. 159/69, mm. 25, 30d.

⁵ E. 159/71, mm. 52, 53.

⁶ *Statutes of the Realm*, i. 131.

arrived or left. He also established exchange tables at Dover and some of the other ports, so that men could exchange their foreign coins for English money on arrival and change their English money back into their own currency on departure.¹ Finally, he insisted that everyone was to sell wool, woollfells, leather, lead, or tin for good and legal sterling, even though pollards and crockards continued to circulate within the country and could be used for the purchase of other merchandise.

Edward's willingness, however, to grant pardons and privileges, especially to Italian merchants, seriously undermined the effectiveness of his legislation. On 3 August 1299, for example, the king pardoned the Frescobaldi for bringing in £99. 10s. of pollards and crockards and in September he not only pardoned certain merchants from Bruges for bringing bad money into Ireland, but also restored the £954 in pollards which had been arrested on them.² Consequently little money was collected in fines and only £1,132 in forfeited coins was paid into the wardrobe in 1299.³ Furthermore there were not enough keepers to police the sea coast effectively, so that smuggling was easy. While foreign princes were manufacturing imitation sterlings, some found their way into England. It was equally difficult to prevent the unauthorized export of silver and English coin, as, unless a ship was on the point of departure, merchants could always claim that they were planning to spend their English money the next day.⁴

The legal circulation of pollards and crockards within England added to the difficulties of enforcing the new orders. Bailiffs at Bristol, for example, arrested a merchant possessing pollards and crockards on the assumption that he had landed with them from abroad, and then discovered that he had legally acquired them within the country, before he crossed the Channel.⁵ But Edward had not been able to demonetize them in May 1299, as there was not enough good money in circulation. For, between 1294 and 1298, at least £350,000 had been shipped abroad in pursuit of Edward's diplomatic and military manœuvres and little new money was coined.⁶ Without pollards and crockards, therefore, trade and commerce would have dried up. Yet no one wanted to receive pollards and crockards and everyone was trying to dispose of those that they had. When Italian merchants made loans to the Crown, they made them in pollards, not sterling.⁷ Even the wardrobe, when it paid off a series of small debts that the king owed for goods delivered to the kitchen, paid them in pollards.⁸

¹ Italian merchants from Lucca, the Ballardi, were asked to keep the tables, but the king appointed his own clerks as controllers (*Cal. Patent Rolls, 1292-1301*, pp. 417, 418).

² *Cal. Patent Rolls, 1292-1301*, p. 430; *Cal. Close Rolls, 1296-1302*, p. 267. Similar pardons were granted to the Spini and other foreign merchants.

³ E. 101/356/21 records the receipt by the keeper of the wardrobe in 1299 of £1,132. 12s. 3½d. in forfeited pollards and crockards and £26. 8s. 4d. from forfeited sterling and silver vessels. The receipt of some of this money is also recorded in the *Liber Quotidianus Contrarotulatoris Garderobae Anno Regni Regis Edwardi Primi Vicesimo Octavo* (London, Society of Antiquaries, 1787), p. 5 and a further confirmation can be found in John de Sandale's account on the Pipe Roll (E. 372/168, m. 18d). Sandale's account gives a total of £2,131 of forfeited pollards received between 1299 and 1302, but this sum includes the £954 of pollards

which was restored to the merchants of Bruges.

⁴ In Oct. 1299, two Brabantine merchants were arrested because the searchers were sure that they were planning to take £12 of good sterling out of the country. The merchants denied this, and, at the request of the duke of Brabant, they were released and their money was restored to them (*Cal. Close Rolls, 1296-1302*, p. 279).

⁵ *Cal. Close Rolls, 1296-1302*, p. 264.

⁶ Only £1,110 of pennies, £180 of halfpennies, and £720 of farthings had been minted at London between Sept. 1297 and Oct. 1298.

⁷ *Cal. Patent Rolls, 1292-1301*, p. 447.

⁸ E. 101/354/24. Some of the debts had been outstanding since 1296, so the conclusion is inescapable that the wardrobe was seizing this opportunity to get rid of some unwanted pollards to unsuspecting creditors who were pleased to receive any money at all.

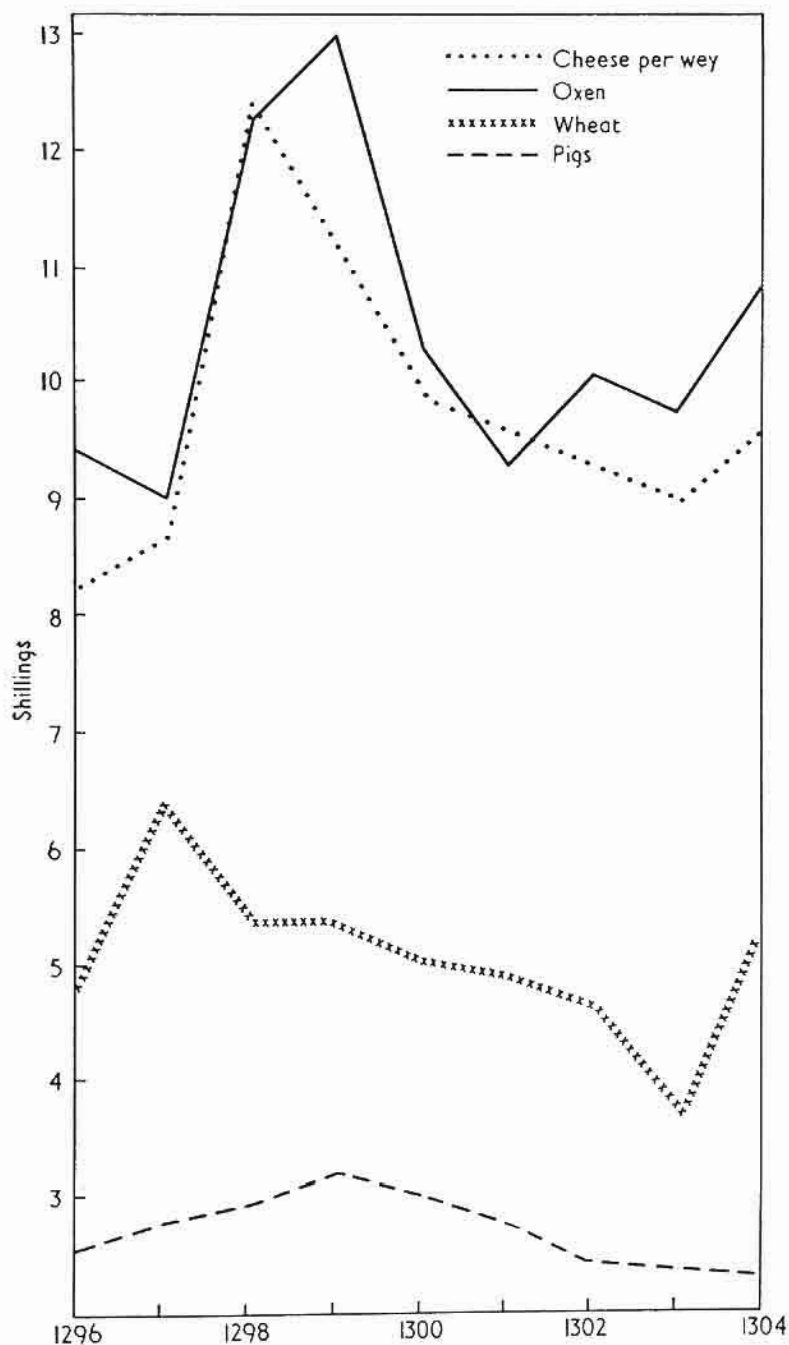


FIG. 3. Selling price of oxen, cheese, wheat, pigs, 1296-1304.

The continued circulation of bad money also kept prices high.¹ Prior to 1299 many prices had risen as high or higher than they had in 1278.² Yet the summers of 1297 and 1298 had been very dry and the grain yields were above average,³ so that one would have expected grain prices to drop more than they did (see Fig. 3). Bailiffs forced to account for their swollen expenditure blamed crockards for the general dearth of goods.⁴ Another factor, however, contributing to the general inflation was again unusual government expenditure. To pay for his expeditions in Wales and Gascony the king had levied heavy taxes, which could only be met by taking money out of savings or borrowing. Government spending, however, continued at a high level and prices began to fall as soon as the king had solved the problem of pollards and crockards, which suggests that, as in the crisis of 1278, the monetary factor was the most important.

It was not until the end of 1299 that sufficient foreign silver had been recoined at London to bolster up the circulation and enable the king to demonetize pollards and crockards.⁵ He did not, however, do this immediately, but, on Christmas Day 1299, decided to make two pollards worth one sterling.⁶ This was a mistake. All holders of pollards, whether they used them in trade, or paid them in at the exchange, lost money, as what had been worth a penny was now worth a halfpenny. Wardrobe officials, for example, in January 1300, found £174. 16s. in pollards in the hands of various people, but when they came to use this money, it was worth only £87. 8s.⁷ Yet many pollards and crockards approximated in weight and fineness to their English counterparts.⁸ So it was preferable to melt them down and take the silver, not the coins, to the exchange. This was forbidden,⁹ but men still did it, rather than lose their money. In addition people were afraid that pollards and crockards would soon be demonetized completely and become valueless. Many, therefore, refused to accept pollards for goods,¹⁰ or in repayment of their debts.¹¹

Others insisted on receiving a higher price in pollards than sterling. Even in London, where a proclamation had been issued in Christmas week, setting standard prices which were not to be exceeded and men from each trade had been elected to see that the prices

¹ In the Norfolk manor of Caister barley sold at different times for 4s., 6s., 6s. 8d., and 8s. per quarter, but one single quarter sold at 2s. 8d. and no more 'quia de bono monet' (D. L. Farmer, 'Grain Price Movements in the Thirteenth Century', *Economic History Review*, 2nd ser. x (1957-8), p. 210.

² Comparison of the national price levels of oxen, cheese, and pigs

Date	Oxen	Cheese	Pigs
1277	13s. 3½d.	9s. 9½d.	3s. 0½d.
1278	13s. 11½d.	11s. 0½d.	3s. 9½d.
1279	13s. 0½d.	9s. 4½d.	2s. 9½d.
1297	11s. 7d.	8s. 8½d.	2s. 9½d.
1298	13s. 11½d.	12s. 4½d.	2s. 11d.
1299	12s. 5½d.	11s. 2½d.	3s. 2d.

³ J. Titow, 'Evidence of Weather in the Account Rolls of the Bishopric of Winchester, 1209-1350', *Economic History Review*, 2nd ser. xii (1960).

⁴ Ibid.

⁵ £13,009 of foreign silver, including pollards and crockards, had been brought to the London mint by Sept. 1299 and more would have arrived between Sept. and Christmas.

⁶ *Munimenta Gildhallae Londoniensis*, ed. H. T. Riley (Rolls Series, London, 1859), ii. 187, 562.

⁷ For this and other examples of Wardrobe losses see *Liber Quotidianus*, pp. 5, 52-3, 57, 60, 67-8.

⁸ From the cases recorded in the *Liber Quotidianus* Charles Johnson has calculated that the average value of the pollards and crockards was 72.5 per cent of the sums they nominally represented (Introduction to *English Mint Documents*, p. xxxix). In 1297 the official exchange rate in the Low Countries was 22s. crockards to 20s. sterling (E. 372/146, m. 54).

⁹ *Munimenta Gildhallae Londoniensis*, ii, p. 565.

¹⁰ The *Liber Quotidianus* (p. 5) records the receipt of a fine by a merchant for refusing to accept for his goods 'money commonly current in England'. At Oxford, master Nicholas de Whitchurch, having sold his horse, refused to receive 28s. in pollards for it (E. 159/74, m. 29).

¹¹ *Calendar of Early Mayor's Court Rolls, 1298-1307*, ed. A. H. Thomas (Cambridge, 1924), pp. 56, 58; *Select Cases in the Exchequer of Pleas*, ed. Hilary Jenkinson and Beryl Formoy (Selden Society, vol. 48, London, 1932), p. 187; *Select Cases on the Law Merchant*, ed. Charles Gross (London, 1908), i. 108.

were observed, merchants were still guilty of selling merchandise more dearly than they ought to have done.¹ Thus the chandlers admitted that they sold a pound of tallow candles at 4d. before and 5d. after Christmas. The coppersmiths also admitted selling dearer, but pleaded that the pound of metal they bought at 2d. before Christmas cost 4d. or 5d. after.² As prices rose, so did wages, and the cordwainers received a penny more for repairing a dozen pair of shoes and a halfpenny more for each pair of top boots and ankle boots 'on account of the high prices of food and the decreased value of money'.³

Sheriffs and other royal officials also refused to receive payments in anything but sterling, even though the king assured them that pollards and crockards would be accepted at the exchequer.⁴ Eventually Edward was forced to grant special privileges. In March 1300 he promised the citizens of Bayonne that they could receive the custom on wools in sterling.⁵ He also allowed the prior of Okeburn and other priors to pay 1 mark sterling for each pound of pollards due from fines that they had made.⁶ Finally the king and his council decided that it was useless to continue to force people to accept pollards and crockards at the reduced rate. The only solution was to demonetize them entirely. On 26 March, therefore, the king informed all the sheriffs that after Easter (10 April) only English sterlings were to be current in the country and all pollards and crockards had to be brought to the royal mints.⁷

To cope with the extra work caused by this demonetization, the king and his council decided to reopen the provincial mints.⁸ But as they did not have sufficient good money to repay immediately everyone who brought pollards and crockards to the exchanges, they let the Frescobaldi have control of three exchanges, at Hull, Newcastle upon Tyne, and Exeter.⁹ It was then the responsibility of the Frescobaldi, not the king, to find both the men to act as changers and the money with which to maintain these exchanges.¹⁰ Minting in England remained under the direct control of the London Master of the Mint, John Porcher, although he had the right to appoint deputies in the provincial mints.¹¹ In Ireland, however, the king gave Italian merchants control of both the mint and the exchange, by appointing Alexander Normanni of Lucca his Master of the Money and granting the Frescobaldi custody of the exchange.¹²

¹ The proclamation of Christmas week, including the prices that were set, is printed in *Munimenta Gildhallae Londoniensis*, ii. 567. A summary together with a list of the names of the men elected from the different crafts is given in *Letter Book C*, pp. 54-5.

² Cases held before the mayor and aldermen in Feb. and Mar. 1300. *Early Mayor's Court Rolls*, pp. 59-65. Men found guilty were either committed to prison or charged to appear before the king and his council at the next parliament.

³ *Early Mayor's Court Rolls*, p. 418. In 1303, when the monetary situation had improved, the master cordwainers reduced the journeymen's wages to their pre-1299 level.

⁴ E. 159/73, m. 12. Letter from the king to the Treasurer and barons of the exchequer, ordering them to send the necessary orders to the sheriffs.

⁵ *Cal. Close Rolls, 1296-1302*, p. 338.

⁶ *Ibid.*, p. 345. See also E. 159/73, mm. 14, 15, 18.

⁷ *Cal. Close Rolls, 1296-1302*, p. 385. Michael Prestwich, 'Edward I's Monetary Policies and Their Consequences', *Economic History Review*, 2nd ser.

xxii (1969), states that the proclamation of Christmas 1299 mentions the future demonetization of pollards and crockards at Easter 1300. This is not true. Between 25 Dec. 1299 and 26 Mar. 1300 no one knew how long the king planned to leave pollards and crockards as legal tender but at the reduced rate. It was this uncertainty which caused so much confusion and distress and made people so unwilling to accept or trade with pollards and crockards.

⁸ *English Mint Documents*, ed. Charles Johnson (London, Nelson, 1956), p. 62.

⁹ The exchanges at Canterbury, Bristol, and Chester were under the control of the London mint (*Cal. Patent Rolls, 1292-1301*, p. 504).

¹⁰ Through their control of the exchanges, they made a profit of 2,700 marks sterling (C. 47, Bundle 13, File 1; S.C. 1/47, no. 120).

¹¹ One of his brothers, Boniface, became Master at Bristol and another brother, William, was Master at Canterbury (E. 159/74, mm. 27d, 32).

¹² *English Mint Documents*, pp. 64-5.

New mint buildings were erected and foreign workers were recruited from abroad, but frequently the workers arrived before the buildings were completed. At Bristol, for example, twenty-seven workers were unemployed for eight days while they were waiting for the new exchange to be completed,¹ and at Exeter twenty foreign workers and moneyers spent nine days waiting idle.² At the other provincial mints, although the moneyers could start work immediately, they were later unemployed for long periods because no silver was available.³ Similarly, at London, a new building was erected within the mint 400 feet in length and costing £166. 2s. 7d. in order to house the 264 extra foreign workers. But twenty-six of them were kept idle from four to six days because their seats were not ready. Even when they were working they do not seem to have been used to their full capacity, for they coined only £148,650 at London between September 1299 and September 1301 compared with the £343,980 minted at London in 1279-81 with the help of 200 foreign workers. Altogether 451 foreigners came to England at a total cost of £1,146. 16s. 8d.⁴ This expense does not seem to have been justified and it is clear that mint officials overestimated the amount of silver that would be brought to the mints.⁵

While the recoinage was taking place the king insisted on a strict enforcement of his new orders. On 1 April 1300 he appointed a three-man commission to find out who had exported silver or imported pollards and crockards in the city of London and the counties of Norfolk, Suffolk, Essex, and Lincoln, probably because these counties were nearest to the Low Countries and received more than their fair share of bad money. But money circulated rapidly and soon reached the north and west. Edward, therefore, appointed twelve other special commissions, covering every county in England and Ireland.⁶ Most of the guilty were fined, although in October 1300 two men were drawn and hanged for bringing into the country £11. 8s. 4d. in counterfeit sterlings and 8s. 1d. in white *tournois*.⁷ The fines were collected by the sheriffs who often used the money to pay off royal debts and expenses,⁸ so it is impossible to find exactly how many people were convicted and the total amount collected in fines. £1,799. 16s. 6d., however, was paid into the exchequer during the financial year 1300/1⁹ and nearly as much was clearly outstanding.¹⁰ But not

¹ E. 101/288/30. The men received 10d. a day while they were not working, but a woman worker, who was unemployed during the same period, received only 5d. a day.

² Ibid. On 4 Oct. 1300 the sheriff of Devon was allocated £24. 2s. 6d. which he had spent on repairs to houses in the town of Exeter for the workers of the money and for the royal exchange (E. 159/74, m. 5).

³ E. 101/288/30. At York and Hull the moneyers were idle for forty days. At Chester five moneyers and twenty-six workers were idle for twenty-four days, then sixteen of the men left, but the remainder were still unemployed for another fourteen days. At Newcastle workers were idle for twelve and a half days in 1300 and in 1301 were unemployed on ten different occasions, generally for just a few days, but once for as long as sixteen days.

⁴ Ibid.; E. 372/150; E. 159/77, m. 6. The foreign workers came over in small bands headed by contractors, whose names are given by Craig, *The Mint* (Cambridge, 1953), p. 56.

⁵ At Canterbury, although £22,340 was minted

between Nov. 1299 and Sept. 1300, the amount dropped to £12,250 in 1300/1 and to £3,070 in 1301/2. (E. 101/288/30). In the Pipe Roll account (E. 372/150) for the year 29 (1300/1) the amount of pennies minted is given as £22,250. This figure is copied by C. G. Crump and C. Johnson in 'Tables of Bullion coined under Edward I, II, III', *NC*, 4th ser. xiii (1913) and quoted by Sir John Craig in his book on the mint. But this is clearly a clerical error, for only £10,534. 3s. 6d. of silver had been brought to the mint and the correct figure must be the one in the original account E. 101/288/30.

⁶ *Cal. Patent Rolls, 1292-1301*, pp. 525, 528, 549, 550-1; E. 159/73, mm. 17, 32.

⁷ E. 159/74, mm. 31, 31d.

⁸ E. 159/73, mm. 50d, 58, 43d; E. 159/74, m. 61.

⁹ Michaelmas Term

1300/1 £845. 15s. (E. 401/148).

Easter Term 1301 £859. 12s. 6d. (E. 401/149).

June and July 1301 £94. 9s. (E. 401/150).

¹⁰ From the sheriffs' accounts on the Pipe Rolls (E. 372/144, E. 372/145) £1,765 15s. 6d. was still owing, most of it (£1,177. 14s. 8d.) from fines in Norfolk.

one of the fines was as severe as the 1,000 marks paid by master Elias, son of master Moses, in 1280.¹ The Jews, of course, were guilty of clipping the coin, not of bringing in false money, but the frequent hangings and the heavier fines imposed on them do appear to be, in part, the result of their religion and not the differences in the crime.

The Italian merchants received special consideration from the king and escaped the scrutiny of the commissioners. Edward granted them a general pardon and promised that any of their members who had already been arrested would be released and that any future indictment against them would be ignored. Consequently the justices were given specific instructions 'to let them go in peace and not to meddle with them'.² Thus when a group of justices went to Boston to try offenders, the king reminded them not to hinder the Italian house of Mozzi, who were to be allowed to buy and sell and make their profit without interference.³ Certainly there is no record of any severe penalties being paid by any Italian house. For the king needed their help in buying up pollards and crockards and bringing them to the exchange. On 12 April 1300 the Frescobaldi received the right to exchange and buy pollards and crockards and all other kinds of counterfeit money, provided that they then took this money to the royal mints to be recoinced.⁴ Later the privilege was extended to other Italian societies.⁵ The Ballardis also obtained the right to receive pollards and crockards from their English creditors in settlement of their debts.⁶ In addition the king borrowed £1,900 from various Italian merchants to serve as a fund for exchanges,⁷ so it is not surprising that he was unwilling to antagonize them with arrests and prosecution.

The king's willingness to grant special privileges also weakened his legislation against the export of silver. On 11 April 1300 he ordered the bailiffs and constables of nearly every port, both large and small, to proclaim publicly every fifteen days that no one was allowed to carry out of the country silver vessels and coin.⁸ Two days later, however, he allowed the abbot of Fécamp to take abroad six silver cups, twelve silver spoons, and other silver vessels. Later, in October, he granted a similar privilege to William Reymund, who was allowed to carry with him £112 in sterling and sixteen silver cups.⁹ At other times important men, such as the bishop of Winchester, were allowed to cross with all their household, without a search being made of their belongings, so that it would have been simple for them to take money or silver vessels secretly out of the country.¹⁰ Consequently little money was actually captured by port officials.¹¹

By the end of 1300 the monetary crisis caused by the influx of pollards and crockards

¹ The highest fine in 1300 was the 500 marks levied on William Servat, the Warden of the episcopal mint at Durham, but after the bishop of Durham had spoken for him the fine was reduced to 50 marks.

² *Cal. Close Rolls, 1296-1302*, p. 353; *Cal. Patent Rolls, 1292-1301*, pp. 504, 528.

³ E. 159/73, m. 32d.

⁴ *Cal. Patent Rolls, 1292-1301*, p. 505. They appear to have charged a commission for exchanging, as they made a profit of 500 marks from the exchange of sterling for pollards (C. 47, Bundle 13, File I, no. 28).

⁵ *Cal. Patent Rolls, 1292-1301*, pp. 519, 528, 531. The Ballardis were granted this right on 19 June, the Spini on 21 July, and the remaining Italian societies on 16 Aug. To receive their licence to buy pollards and crockards the Ballardis paid £500 (E. 159/73, m. 44). Presumably the other Italian merchants paid likewise.

⁶ *Cal. Patent Rolls, 1292-1301*, p. 510.

⁷ E. 101/388/30; E. 372/150. He promised to repay them out of the issues of the exchange by All Saints, but failed to do so, although he may have met his obligation later, from some other source.

⁸ *Cal. Close Rolls, 1296-1302*, pp. 390-1. This order was sent to the bailiffs of sixty-eight ports, as well as the justices of Chester, Ireland, and Wales, and the keeper of the islands of Guernsey and Jersey.

⁹ *Ibid.*, pp. 348, 369.

¹⁰ *Ibid.*, pp. 349, 416.

¹¹ Between 1299 and 1300 the scrutinizers of the money arrested £306. 1s. 5d. sterling as well as gold and silver vessels worth £16. 4s. 10d. (E. 372/168, m. 18d), but some of this money could have been forfeited because of the illegal importation of pollards and crockards.

was over. The majority of foreign coins in circulation had been brought to the mints and recoined and all the provincial mints except Newcastle upon Tyne had closed.¹ The threat to the English coinage had been serious, for pollards and crockards had constituted a significant part of the English money in circulation in 1299.² Although most of these coins were only slightly lighter than their English counterparts, they had been made by foreign princes, who had usurped Edward's rights, debased his image, and deprived him of the revenue he would otherwise have received. It is small wonder that the king refused to countenance pollards and crockards and determined to turn them into good English money.³ In this he succeeded. By 1301, apart from the scattered coins which found their way into hoards, few pollards and crockards were left in circulation.

The king was less successful in solving the economic crisis which accompanied the influx of pollards and crockards. By insisting that men accept two pollards for one sterling in the early months of 1300, he caused prices to stay as high as they had been in 1299 or rise even higher. Moreover, after pollards and crockards had been finally demonetized in April 1300, prices still stayed high in many districts, even though the national averages did start to drop.⁴ In one Winchester manor, for example, the bailiff explained that he had spent so much on carts, because iron was twice as expensive as usual on account of the bad money. Similarly another bailiff pointed out that his expenses were so large that year because all provisions were dearer as a result of the crockards.⁵ In London, when, in October 1300, a group of skinnners were attached for raising prices, they pleaded that 'all necessities for their work were dearer than before'.⁶ Eventually they were forced to lower their prices, but it was not until 1303 and 1304 that the full effect of the demonetization was felt and prices dropped to their lowest point in the first quarter of the fourteenth century.⁷

¹ By Dec. 1300 £183,920 of bad money had been reminted and another £64,750 was coined the following year (E. 101/288/33; E. 372/150). H. A. Miskimin in *Money, Prices and Foreign Exchange in Fourteenth Century France* (New Haven, Yale University Press, 1963) is wrong in linking this large mint output of 1298-1301 in England with the substantial French coinage of 1298-9. The pollards and crockards came not from France, but from the Low Countries.

² Between 1278 and 1299 about £800,000 of new money had been coined, but much of this had been exported or hoarded.

³ Although this had not been his main concern, the king, in the process of the recoinage, had made a profit of £5,000 by the end of 1300 (E. 101/288/30).

Profit from *Canterbury	£554	10s.	9½d.
Bristol	489	16s.	2d.
Chester	13	1s.	
Exeter	131	3s.	3½d.
*Newcastle	215	0s.	1½d.
*London	3,988	17s.	9½d.
Total	5,926	8s.	3d.

Less the expense of bringing
over the foreign workers

1,146 16s. 8d.

Final Total

£4,779 11s. 7d.

* These figures are calculated until Sept. 1300.

Michael Prestwich, 'Edward I's Monetary Policies and Their Consequences', *Economic History Review*, 2nd ser. xxii (1969), quotes the much higher profit of £10,916. This figure, however, includes the profit from the money coined at London, Canterbury, and Newcastle in 1301 and 1302 and does not take account of either the expense of bringing in the foreign workers or the money owed by John Porcher, which it took the Crown many years to recover.

⁴ See D. L. Farmer, 'Some Livestock Price Movements in Thirteenth Century England', *Economic History Review*, 2nd ser. xxii (1969).

⁵ J. Titow, 'Evidence of Weather in the Account Rolls of the Bishopric of Winchester, 1209-1350', *Economic History Review*, 2nd ser. xii (1960), p. 381, note 1.

⁶ *Early Mayor's Court Rolls*, p. 92.

⁷ See Farmer, *op. cit.*, note 4, and Fig. 3. This short-term fluctuation does not seem to have been the result of either a bad harvest or a sudden surge in population and must be attributed primarily to the circulation of pollards and crockards, combined with high government expenditure.

Many bailiffs and others who had received pollards at the rate of one for a penny in 1299 lost heavily when they were forced to pay them out at two for a penny in 1300. In most cases the bailiffs on monastic and other non-royal estates were able to pass the losses on to their estates,¹ but sheriffs and other receivers of royal revenues found it difficult to obtain an allocation from the king. The sheriff first had to file a suit against the king in parliament. Then the barons of the exchequer conducted a thorough inquisition to satisfy themselves that the sheriff had received the pollards and crockards between Michaelmas and Christmas 1299, that he had given full acquittance to the men paying him, and that he had received no orders to spend them on the king's affairs or to pay them in at the exchequer before the end of 1299. They also wanted to make sure that when he used the money after Christmas he received only half its original value.² Only if the sheriff or other official satisfied all these requirements, did he eventually receive a full allocation for the money he had lost.³ But the sheriff of Southampton had to wait some time before his case could be heard and although he made his application at the end of 1301, he did not receive his allocation until 1306.⁴ When Edward II came to the throne several claims were still outstanding and it was not until 1311 that the sheriff of Devonshire, Gilbert de Knovill, finally received his allocation, as the justice in charge of making the inquiry had been slow in making his report.⁵

In 1299 the king had been faced with two problems. He had to deal with the pollards and crockards already in circulation and he had to prevent the importation of any more. In tackling the first problem, Edward decided to make two pollards worth one sterling. This was a mistake, as men either refused to accept pollards or insisted on receiving more in pollards than they would have in sterling. All holders of pollards, from the lowest merchant to the highest royal official, lost money, as what had been worth a penny was now worth a halfpenny. Consequently, even though the demonetization of pollards and crockards did restore the stability of the English coinage, it also caused many people considerable hardship. To prevent the further importation of pollards and crockards, the king issued new orders. But his willingness to grant pardons and privileges, especially to Italian merchants, undermined the effectiveness of his legislation, and the importation of counterfeit coins continued to be a problem.⁶

¹ The bailiffs of Merton College estates sought and received an allocation for £22. 16s. 11½d. 'on account of the change of money', James E. Thorold Rogers, *A History of Agriculture and Prices in England* (Oxford, 1866), ii. 664. The treasurers of the priory of Christ Church, Canterbury, also received an allocation for £240 'for the exchange and damage of pollards', *V.M.A.* 1. 228.

² *Cal. Close Rolls, 1296-1302*, p. 447; E. 159/74, m. 26.

³ The keepers of the archbishopric of York received £44. 10s. (E. 159/76, m. 25d). John Abel, sheriff of Surrey and Suffolk, received £95 (E. 159/77, m. 27, 27d).

⁴ E. 159/75, m. 85; E. 159/79, m. 45.

⁵ He petitioned the king in Nov. 1308 (E. 368/79, m. 30). Although an inquiry was ordered the same month, the justice in charge did not make his report until Easter 1311 (E. 368/81, m. 53d).

⁶ In 1301 a Flemish ship was forced into the port of Pevensey during a storm and the keepers of the sea coast found a merchant from St. Omer carrying £102 in pollards and crockards (E. 159/75, mm. 23d, 24, 70; *Cal. Close Rolls, 1296-1302*, p. 434). It is doubtful whether this money would have been discovered if the captain could have landed wherever he wished.

VI. LAST YEARS

From 1301 until his death in 1307 Edward I faced the same problems he had had in the past and tackled them in the same way. He sought constantly to prevent the import of foreign, counterfeit money and the export of good, English silver. But after 1304 this task became more difficult as merchants legally brought large quantities of foreign silver to the English mints. Not all the new English coins were used in trade and merchants and others frequently tried to take them out of the country. Edward, however, was unwilling to relax his restrictions on the export of money until the very end of his reign.

Although pollards and crockards had been withdrawn from circulation in England, they and other counterfeit coins were circulating on the Continent and remained a potential threat to the English coinage. How serious was this threat? It is difficult to determine, but when two foreigners were arrested in October 1300 for bringing counterfeit and foreign money into the country, they said that many other merchants were planning to land on the east coast, bringing with them £30,000 or more of false, counterfeit money to use in trade.¹ Obviously worried by this report, and accepting its validity, the king wrote to the sheriffs ordering them to appoint keepers to watch over all places where ships could land.² The keepers of the sea-coast, however, arrested little money or none at all. When they made their reports at the Exchequer, most of them insisted that they had received nothing during the whole time they had been appointed.³ Others found merchants carrying very small sums of false money such as 4*d.* or 3*d.*⁴ Only in a few ports were substantial amounts forfeited.⁵ The king therefore became convinced that merchants who intended to bring false money into the country, avoided the major ports, where the keepers were waiting to search their goods, and landed along the Thames and in 'other secret places out of the common ways' so that their goods might not be scrutinized.⁶ Some merchants probably did illegally import false money, but there is no evidence of widespread circulation of bad money in England after 1301. What is more probable is that the presence of the keepers of the sea-coast acted as a deterrent, and encouraged merchants with foreign coin to take it to the exchange rather than risk forfeiting it and their other goods.⁷

For the influx of foreign silver into England at the end of Edward's reign was sudden and apparently unexpected. There were no warning signs. After the recoinage of pollards and crockards the mints at London and Canterbury had been quiet, coining between three to five thousand pounds a year. The king even had to borrow money from the mayor of Bayonne to sustain the exchange.⁸ Then, in 1304, foreign silver began

¹ Letter of the justice who tried the case, Henry Spigurnel, to the Treasurer and Barons of the Exchequer, E. 159/74, m. 31, 31*d.*

² *Cal. Close Rolls, 1296-1302*, p. 412.

³ E. 159/75, mm. 23, 24, 70. The keepers of the ports of Maldon and Harwich in Essex; the rapes of Chichester, Bramber, and Pevensy in Sussex; the port of Bristol in Gloucestershire; the ports of Ottermouth and Sidmouth in Devon; the ports of Barton, Saltfleet, Skegness, Waynfleet, and Boston in Lincolnshire and the ports of Scarborough, Whitby, and Hull in Yorkshire all reported arresting nothing.

⁴ The wardens at Yarmouth. Their total bad money collected was 15*s.* 1*d.*, of which the largest single sum forfeited was 5*s.* 9*d.* K.B. 27/171, m. 75.

⁵ Blakeney £28. 19*s.* 10*d.*; Lynn £62. 4*s.* 8*d.*; Portsmouth £72. 10*s.* E. 159/78, mm. 32*d.*, 36, 37*d.*, 40*d.*

⁶ April 1306. *Cal. Patent Rolls, 1301-7*, p. 341.

⁷ Several men who paid fines in 1300 brought silver to the exchange in 1306 to 1308 (E. 372/145, E. 519/74, m. 61; E. 101/289/5; E. 101/289/8).

⁸ E. 372/150. The membranes on this roll are unnumbered.

to flow in. At Canterbury the total foreign silver purchased increased from £2,000 to £14,000. At London, the total jumped from £4,000 to nearly £16,000. These amounts increased year after year until in 1309 merchants took £93,336 of foreign silver to the London mint. Never had so much foreign silver been purchased at London.¹ Yet the English mints had taken no direct action to attract silver and mint officials seem to have been completely taken by surprise. When John de Everdon became Warden of the Exchange in 1305, he found that the silver already in the exchange could not be minted within six weeks. From his report to the Barons of the Exchequer, it is clear that his predecessor had made no preparations to cope with this sudden influx, and that he himself had no idea why 'merchants were daily bringing silver there in great quantities'.²

Despite the great increase in the number of coins in circulation, Edward continued to enforce his earlier prohibition against the unauthorized export of money or silver of any kind. Bailiffs at the major ports were ordered to search all merchandise diligently and many merchants were arrested, fined, and imprisoned for trying to take money out of the country.³ In addition the king was unwilling to grant many licences for money to be legally carried out of the country⁴ and in 1305 he refused to allow the duke of Brittany to export in money the revenues of his estates.⁵ He was also anxious to prevent the priors of foreign orders, such as the Cistercians and the Premonstratensians, taking any money or silver with them when they visited their mother house on the Continent.⁶ In the last year of his reign, however, the king granted five licences for the export of money,⁷ and agreed to restore £4. 3s. which had been arrested in the hands of two London pilgrims on the grounds that they had been ignorant of the prohibition and were planning to use this money for the expenses of their pilgrimage.⁸ Had he not died when he did, he might perhaps have further relaxed the restrictions on the export of money, as there was clearly a plentiful supply of good English money within the country.

The maintenance of the stability of the English coinage, in the face of severe monetary problems, was one of Edward I's major administrative accomplishments. Shortly after his return from Palestine in 1274, he had found confidence in the royal money dwindling as the practice of clipping and other monetary offences grew. His response was harsh, but effective. He exacted fines from many convicted coin-clippers; the rest he hanged. Meanwhile he called in the old coins and replaced them with new ones, the Edwardian pennies, of a design retained in the subsequent English coinage for two centuries. These new English coins were so highly prized on the Continent that foreign princes in the Low Countries and northern France began to produce imitations of lesser weight and fineness for use in the English wool trade. When Edward saw how easily the importation of these imitations could corrupt his new coinage, he tried, in various ways, to keep bad, foreign money out of the country and to remove all clipped and counterfeit coins from circulation within the country. He succeeded and by 1307 there was no real

¹ The previous high point had been reached in 1285/6, when £42,387 was purchased.

² He asked for and received permission to recruit seventy-two additional foreign workers E. 372/153, mm. 32, 32d. E. 368/75, m. 44d.

³ *Cal. Close Rolls, 1296-1302*, pp. 480, 509, 566, 568. E. 159/74, m. 24; E. 159/79, m. 40, 57.

⁴ He issued one licence in 1301, one licence in 1304, and one licence in 1305 (*Cal. Close Rolls, 1296-1302*,

p. 445; *ibid.*, 1302-7, p. 137).

⁵ *Records of the Parliament holden at Westminster on 28th day of February in the 33rd year of the reign of King Edward I*, ed. F. W. Maitland (Rolls Series, London, 1893), p. 95.

⁶ *Cal. Close Rolls, 1296-1302*, pp. 513, 539, 550, 576; *ibid.*, 1302-7, pp. 69, 209.

⁷ *Ibid.*, 1302-7, pp. 473, 482, 505, 508, 510.

⁸ E. 159/80, m. 52d.

threat to the stability of his coinage. Although he was continually short of revenue, he steadfastly refused to follow the example of his continental contemporaries and debase his coinage, and in 1281 had given up his secret increment of *2d.* which had substantially increased the profit from the mint, as he had been afraid that it might damage the integrity of his money. Throughout his reign he had kept himself well informed on monetary matters and the success of his measures was the result of his constant supervision and effort.

APPENDIX

TABLE I

London Mint, Purchases of Silver

<i>Date</i>	<i>Reference</i>	<i>Amount</i>		
		£	s.	d.
Nov. 1272–Nov. 1273	E. 372/117, m. 7	6,544	1	7
Nov. 1273–June 1275	E. 372/118, m. 18	10,230	1	11
June 1275–June 1276	E. 372/119, m. 40	7,894	10	10
June 1276–Nov. 1278	E. 372/122, m. 28	60,161	9	9
		<i>Old money</i>		
		£	s.	d.
Apr. 1279–Nov. 1279	E. 372/132, m. 3	79,358	18	9
Nov. 1279–Jan. 1280	E. 372/132, m. 3	3,876	12	5
		9,144	0	10
Jan. 1280–May 1280	E. 372/132, m. 3	63,332	10	8
May 1280–Oct. 1280	E. 372/132, m. 3	79,996	4	1
Oct. 1280–Apr. 1281	E. 372/132, m. 3d	36,697	18	2
Apr. 1281–July 1281	E. 372/132, m. 3d	14,582	18	11
July 1281–Sept. 1281	E. 372/132, m. 2	4,726	16	10
Sept. 1281–Oct. 1283	E. 372/132, m. 2	33,573	15	0
Oct. 1283–May 1285	E. 372/132, m. 2	11,359	17	1½
May 1285–Aug. 1286	E. 372/131, m. 4	29,107	19	9
Aug. 1286–June 1287	E. 372/131, m. 4	4,710	16	11
June 1287–Nov. 1287	E. 372/133, m. 29d	3,032	4	8½
Nov. 1287–Nov. 1288	E. 372/133, m. 28	3,813	14	6½
Nov. 1288–Apr. 1290	E. 372/135, m. 1	4,045	16	5½
Apr. 1290–July 1290	E. 372/135, m. 1	282	7	1
July 1290–Sept. 1291	E. 372/136, m. 29	957	8	0
Sept. 1291–Sept. 1292	E. 372/144, m. 26	2,388	7	11
Sept. 1292–Sept. 1293	E. 372/144, m. 26	928	16	7
Sept. 1293–Sept. 1294	E. 372/144, m. 26	2,723	3	8
Sept. 1294–Sept. 1295	E. 372/144, m. 26	3,772	18	3
Sept. 1295–Sept. 1296	E. 372/144, m. 26	3,474	10	6
Sept. 1296–Nov. 1296	E. 372/144, m. 26	333	18	8
Dec. 1296–Sept. 1297	E. 372/144, m. 27	4,664	10	5
Sept. 1297–Oct. 1298	E. 372/144, m. 27	1,636	19	1
Oct. 1298–Sept. 1299	E. 372/150	687	12	6
Sept. 1299–Sept. 1300	E. 372/150	79,650	7	11*
Sept. 1300–Sept. 1301	E. 372/150	32,524	16	7½
Sept. 1301–Sept. 1302	E. 372/150	6,360	4	7
Sept. 1302–Sept. 1303	E. 372/150	1,629	1	3
Sept. 1303–Sept. 1304	E. 372/152b, m. 25	836	10	5
Sept. 1304–Apr. 1305	E. 372/152b, m. 25	365	4	5
May 1305–Sept. 1305	E. 372/153, m. 32	204	19	2
Sept. 1305–Sept. 1306	E. 372/153, m. 32	1,464	0	0
Sept. 1306–Sept. 1307	E. 372/153, m. 32	1,304	9	2
		<i>Foreign silver</i>		
		£	s.	d.
		13,974	9	3
		400	0	0
		1,112	3	8
		16,399	0	0
		14,297	16	1
		4,448	12	2
		15,887	2	8
		5,329	11	4
		44,443	1	6½
		26,222	4	6
		42,387	4	0
		41,551	17	7
		19,532	13	6
		33,017	17	1½
		11,555	1	9
		4,598	4	8
		1,218	19	5
		2,679	16	11
		2,166	2	9
		3,594	13	7
		1,982	8	10
		1,145	11	2
		729	10	3
		1,682	17	3
		405	2	9
		13,009*	16	0
		29,944*	13	10
		3,583	17	8
		394	0	9
		3,922	10	4
		15,784	17	2
		22,311	4	5
		45,395	8	11
		59,857	8	6
		85,018	13	4

* This sum includes pollards and crockards.

TABLE 2

London Mint, Profit

<i>Date</i>	<i>Revenues</i>			<i>Expenses</i>			<i>Profit</i>		
	£	s.	d.	£	s.	d.	£	s.	d.
Apr. 1279–Nov. 1279	7,303	13	5	3,381	16	1	3,921	17	4
Nov. 1279–Jan. 1280	1,132	18	2	471	2	8½	661	15	6½
Jan. 1280–May 1280	5,895	19	10	1,749	12	2	4,146	7	8
May 1280–Oct. 1280	9,298	3	6½	3,344	1	0	5,954	2	6½
Oct. 1280–Apr. 1281	3,452	13	2	1,698	10	11	1,754	2	3
Apr. 1281–July 1281	1,531	13	11	136	8	6½	1,395	5	4½
July 1281–Sept. 1281	399	14	0	14	6	6	385	8	6
Sept. 1281–Oct. 1283	3,081	4	4½	545	11	11	2,535	12	5
Oct. 1283–May 1285	1,493	9	0	243	0	11½	1,250	8	0½
May 1285–Aug. 1286	4,593	4	7	2,472	0	10½	2,121	3	8½
Aug. 1286–June 1287	2,707	19	6	1,092	1	0½	1,615	18	6
June 1287–Nov. 1287	1,409	3	0	786	8	9	622	14	3
Nov. 1287–Nov. 1288	2,292	6	0	1,019	4	6½	1,273	1	5½
Nov. 1288–Apr. 1290	986	6	4½	492	4	6½	494	1	10
Apr. 1290–July 1290	301	8	2	125	12	11	175	15	3
July 1290–Sept. 1291	137	10	0½	124	17	4	12	12	8½
Sept. 1291–Sept. 1292	299	16	0	153	7	1	146	8	11
Sept. 1292–Sept. 1293	175	12	9½	107	11	10½	68	0	11
Sept. 1293–Sept. 1294	405	2	7	215	17	2½	189	5	4½
Sept. 1294–Sept. 1295	374	3	7½	219	6	5	154	17	2½
Sept. 1295–Sept. 1296	327	1	2½	169	12	9	157	8	5½
Sept. 1296–Nov. 1296	59	0	4½	15	0	10	43	19	6½
Dec. 1296–Sept. 1297	425	10	7½	229	13	10	195	16	9½
Sept. 1297–Oct. 1298	162	19	9½	145	19	0	17	0	9½
Oct. 1298–Sept. 1299	688	8	4½	407	9	11	366	18	5½
Sept. 1299–Sept. 1300	6,884	4	3¾	2,895	6	6	3,988	17	9¾
Sept. 1300–Sept. 1301	2,421	17	10	1,146	15	10	1,275	2	0
Sept. 1301–Sept. 1302	484	14	9½	280	18	3	203	16	6½
Sept. 1302–Sept. 1303	327	18	11	250	13	1	77	5	10
Sept. 1303–Sept. 1304	861	3	7	540	3	3	321	0	4
Sept. 1304–Apr. 1305	1,142	12	11½	645	15	10	496	17	1½
Apr. 1305–Sept. 1305	2,234	4	10½	1,178	1	7	1,056	3	3½
Sept. 1305–Sept. 1306	3,042	5	7	1,652	11	7	1,389	14	0
Sept. 1306–Sept. 1307	4,548	1	11	2,273	10	2	2,274	11	9

TABLE 3

Seigniorage and Mintage Rates

	<i>Seigniorage</i>		<i>Mintage</i>			
	<i>O.M.</i>	<i>F.S.</i>	<i>O.M.</i>	<i>F.S.</i>	$\frac{1}{4}d.$	$\frac{1}{2}d.$
Nov. 1272-8	6d.					
May 1279-Dec. 1279	9d.		10d.	8d.		
Jan. 1280-May 1280	12d.	11½d.	7d.	5½d.	10d.	
May 1280-Dec. 1280	12d.		7d.	5½d.	10½d.	9d.
					11½d.	
Jan. 1281-Feb. 1281	12½d.	12d.	6½d.	5½d.	10¾d.	8½d.
Feb. 1281-Oct. 1283	9½d.	9d.	6½d.	5½d.	10¾d.	8½d.
Oct. 1283-May 1285	10d.	9d.	6½d.	5½d.	10¾d.	8½d.
May 1285-Aug. 1286	10d.	9d.	6d.	5½d.	9¼d.	7½d.
Aug. 1286-Nov. 1287	10½d.	9d.	5½d.		9¼d.	7½d.
Nov. 1287-July 1290	10¾d.	9¼d.	5½d.		9d.	7½d.
July 1290-1307	10½d.	6d.	5½d.		9½d.	7½d.

O.M. is old money and *F.S.* is foreign silver.

The total deduction per pound can be found by adding seigniorage and mintage.

TABLE 4
Canterbury Mint, Purchases of Silver

<i>Date</i>	<i>Reference</i>	<i>Amount</i>					
		£	s.	d.			
Dec. 1272-June 1274	E. 372/118, m. 18	1,065	7	6			
Apr. 1278-Nov. 1278	E. 372/123, m. 21	803	7	9			
		<i>Old money</i>			<i>Foreign silver</i>		
		£	s.	d.	£	s.	d.
Jan. 1280-Oct. 1280	E. 372/132, m. 2	27,040	9	0	8,167	3	11
Oct. 1280-Mar. 1281	E. 372/132, m. 2	1,422	0	0	813	3	6
Mar. 1281-May 1281	E. 372/132, m. 2	1,452	17	0	1,678	10	1
May 1281-Sept. 1281	E. 372/132, m. 2	1,437	0	0	15,936	0	6
Sept. 1281-Nov. 1282	E. 372/132, m. 2	1,688	1	0	23,400	3	8
Nov. 1282-Nov. 1283	E. 372/132, m. 2	788	0	0	14,468	5	5
Nov. 1283-May 1285	E. 372/132, m. 2	977	16	9	22,523	14	10
May 1285-Aug. 1286	E. 372/132, m. 4	298	15	1	28,329	6	3
Aug. 1286-June 1287	E. 372/131, m. 4	873	12	6	29,699	17	0
June 1287-Nov. 1287	E. 372/133, m. 29d	541	19	1	13,498	9	2
Nov. 1287-Nov. 1288	E. 372/133, m. 28	331	13	4	14,510	1	9
Nov. 1288-July 1290	E. 372/135, m. 1	401	6	11	5,956	11	4
July 1290-July 1291	E. 372/135, m. 1	209	0	5½	744	19	2
July 1291-Sept. 1292	E. 372/144, m. 26d	272	13	4	530	11	9
Sept. 1292-Sept. 1293	E. 372/144, m. 26d	226	17	1	525	14	8
Sept. 1293-Sept. 1294	E. 372/144, m. 26d	69	0	5	98	17	0
Sept. 1294-Sept. 1295	E. 372/144, m. 26d	36	4	3	—	—	—
Mint closed, 1296-9							
Nov. 1299-Mar. 1300	E. 372/150	354	14	7	5,346	13	9
Mar. 1300-Sept. 1300	E. 372/150	17,783	5	8*			
Sept. 1300-Sept. 1301	E. 372/150	9,004	7	6	1,529	16	0
Sept. 1301-Sept. 1302	E. 372/150	2,642	9	9	57	12	8
Sept. 1302-Sept. 1303	E. 372/150	1,511	1	10	1,918	2	10
Sept. 1303-Sept. 1304	E. 372/152b, m. 25	408	16	3	14,596	12	6
Sept. 1304-Apr. 1305	E. 372/152b, m. 25	84	11	2	14,181	15	5
May 1305-Sept. 1305	E. 372/153, m. 32	—	—	—	20,414	6	9
Sept. 1305-Sept. 1306	E. 372/153, m. 32	23	12	6	31,399	13	3
Sept. 1306-Sept. 1307	E. 372/153, m. 32	—	—	—	52,503	3	7

* Pollards and crockards purchased at the same rate as English silver.

TABLE 5

Profit Received from the Canterbury Mint

<i>Date</i>	<i>Revenues</i>			<i>Expenses</i>			<i>Profit</i>		
	£	s.	d.	£	s.	d.	£	s.	d.
Jan. 1280–Oct. 1280	3,089	11	0	1,087	15	3½	2,001	15	8½
Oct. 1280–May 1281	446	16	3	145	13	11	301	2	4
May 1281–Sept. 1281	667	13	10½	66	11	4	601	2	6½
Sept. 1281–Nov. 1282	963	19	4½	31	14	7	932	4	9½
* Nov. 1282–Nov. 1283	367	15	9½	23	10	4½	344	5	5
Nov. 1283–May 1285	553	18	7½	27	11	9	526	6	10½
May 1285–Aug. 1286	1,111	3	4	444	18	4½	666	4	11½
Aug. 1286–June 1287	1,176	11	8½	424	1	4½	752	10	4½
June 1287–Nov. 1287	539	5	3	259	5	8	279	19	7
Nov. 1287–Nov. 1288	577	10	1¾	242	17	2	334	12	11¾
Nov. 1288–July 1290	249	16	4	96	15	10	153	0	6
July 1290–July 1291	33	18	1	20	9	3½	13	8	9½
July 1291–Sept. 1292	30	14	11½	17	17	8½	12	17	3
Sept. 1292–Sept. 1293	40	16	8½	25	18	2	14	18	6½
Sept. 1293–Sept. 1294	9	10	3½	7	17	0½	1	13	3
Sept. 1294–Sept. 1269	2	8	10½	1	18	10½	10	0	
Mint closed, 1296–9									
Nov. 1299–Sept. 1300	929	16	5½	375	5	8½	554	10	9½
Sept. 1300–Sept. 1301	428	15	2½	206	17	3	221	17	11½
Sept. 1301–Sept. 1302	115	16	5½	72	4	11	43	11	6½
Sept. 1302–Sept. 1303	124	10	1½	82	4	1¾	42	5	11½
Sept. 1303–Sept. 1304	462	11	11¾	252	2	10¾	210	9	1
Sept. 1304–Apr. 1305	434	1	5	227	12	8¾	206	8	8½
May 1305–Sept. 1305	620	7	9	319	8	9	300	19	0
Sept. 1305–Sept. 1306	955	16	3	499	11	9	456	4	6
Sept. 1306–Sept. 1307	2,006	10	0	814	18	3	1,191	11	9

* The archbishop's dies were restored to him. After this, revenues and expenses were split: the king received $\frac{5}{8}$, the archbishop $\frac{3}{8}$. The figures given are the king's revenue and profit.

NOTES ON EARLY TUDOR COINAGE

PHILIP GRIERSON

1.¹ KING HENRY VII'S DANDYPRATS

MANY readers of Ruding must have been intrigued by a footnote to his table of silver denominations which runs as follows: 'Camden, in his Remains, article Money, says "King Henry stamped a small Coin called Dandyprats"'.² The citation will be found on p. 207 of the 1614 edition of *Remaines Concerning Britaine*, but so far as I am aware no modern authority on the coinage of Henry VII has commented on it or tried to identify the coin. G. C. Brooke, however, cited a reference to dandyprats in a document of 1530/5 which suggested that they might be some type of half-groat,³ an idea which was later taken up by Frey, though he offered neither justification for the idea nor explanation of the name.⁴

The most helpful collection of references is that in the *Oxford English Dictionary*,⁵ though there are two important ones to be added to its list. The word was used in the sixteenth century in two senses, either for a small coin worth three-halfpence or as a term of contempt, one applied to a dwarf or to a small child. The sense of 'dwarf' is clear in the second half of the century: John Florio's Italian dictionary of 1598 translates *pigméo* as pigmy, dwarf, or dandiprat.⁶ The word survives with this meaning in dialect usage, especially in the north of England.⁷ In the sense of a small coin it existed in the first half of the sixteenth century, and it may be merely an accident that we find this use earlier than the other. The editors of the *OED* make no attempt to decide which was the original meaning of the word, or what its etymology may be.

The five earliest references are one of 1516, which shows it as a coin of inferior weight or fineness but having the nominal value of a half-groat, which was available in quantity at Tournai in that year; one of 1525, which alleges that it was a coin struck by Henry VII in 1492; one of 1530, which implies that it was sometimes found in circulation at that date; one of 1530/5, which shows it to have been then current in Ireland; and one of 1543, which gives it a contemporary value of 1½*d*. They are as follows:

1. An undated set of instructions delivered to Sir Richard Jerningham [Treasurer at Tournai, who was presumably travelling to England], to be shown to the King and his

¹ I should like to express my thanks to my friends Ian Stewart, Christopher Challis, and Michael Metcalf for valuable help and comment on various sections of this paper. I am particularly indebted to Dr. Challis, who called my attention to a pair of 'dandyprat' references I had missed, resolutely declined to accept my initial explanation of the term and thus caused me to think the problem through again, and helped me in many ways with transcripts of sixteenth-century material. On bibliographical problems concerning the *Ground of Artes* I have been advised by Miss K. Pantzer and Mr. P. Wallis, and Mr. A. E. Werner and Mr. M. J. Hughes provided me with essential data on the

fineness of Henry VIII's Tournai coins.

² R. Ruding, *Annals of the Coinage of Great Britain*, 3rd edn., i (London, 1840), p. 12, note *.

³ 'Dandyprats', *NC* 1924, p. 326.

⁴ A. R. Frey, *Dictionary of numismatic names* (New York, 1947), p. 60.

⁵ *OED* iii (1933), p. 24, s.v. DANDIPRAT.

⁶ *A Worlde of Wordes* (London, 1598), p. 277: '*Pigméo*, a pigmey, a kinde of little man like a dwarf, a dandiprat, a twattle, or an elfe.'

⁷ J. Wright, *The English Dialect Dictionary*, ii (Oxford, 1900), pp. 19-20, s.v. DANDYPRAT, and below, p. 85.

Council.¹ It is bound up in Cotton MS. Caligula E.I. fo. 106 (formerly E.II. fo. 33) in the British Museum, and may be summarized as follows:

Whereas his Grace by his letters willed that the dandeptratts in Mr Treasurer's hands, to the sum of xiiij^c li., should be delivered to his coiners to be coined in the fineness of English groats and employed in the payment of the garrison here, the said coiners say that in the melting of them the loss would be so excessive that they will in no wise meddle therewith, and the Treasurer can consequently have no succour or help by the said dandeptratts towards the charge of the garrison.

If the said dandypratts had been in ready and current money, the King's treasure remaining in his said Treasurer's hands would suffice this garrison for the month beginning the 18th day of June and for another month which shall begin the 16th day of July, and in like wise it would pay the one garrison for two months which shall end the last day of July.

And inasmuch as the said dandypratts stand the said Treasurer in no stead, may it please the King's Grace to send letters to his servant Robert Fowler at Calais, willing him to receive the said xiiij^c li. in dandeptratts at the rate of 2d the piece according as the said Treasurer received them, and for him to deliver unto the said Treasurer other xiiij^c li. in ready and current money.

The date of the letter must be 1516, as it fits in with the preoccupations of Jerningham in the early summer of that year, and its allusion to the June/July payments show that it was written in May or early June. The dandypratts were evidently coins having a nominal value of 2d. but with a lower silver content than that of ordinary sterling half-groats.

2. A letter of 1 April 1525 from Thomas Howard, third duke of Norfolk, to Cardinal Wolsey giving an account of his negotiations at Norwich on the previous Wednesday, the 29th 'of this monethe', for the raising of the so-called 'Amicable Grant'.² Those approached had declared themselves unable to pay cash—if they did so, the consequent shortage of coin would bring about a crisis in the local cloth industry—but willing to do so in silver plate. The duke advises the acceptance of the offer, since it would reconcile the persons concerned to the grant, 'and than suche a Coyne might be devised as were the dandipratts of the king [that] ded is [at his] going ouer to Bullen: wherewith the Kings Highnes mought recompens his losse [i.e. in taking plate instead of coin] and yet the same good inough to bee spent in Fraunce'.³ 'The king that dead is' was a normal sixteenth-century way of saying 'the late king', and since *Bullen* is Boulogne the reference would be to Henry VII's continental expedition of 1492.

3. A passage in John Palsgrave's English-French grammatical dictionary, *Lesclarissement de la langue Francoyse* (London, 1530). This gives under *coyle* (i.e. 'cull'), in respect of coin, the separating of the good from the bad, the following entry: 'I coyle with money, I trye the currante from the badde. Coyle out the dandyprattes and Yrisshe pence: *Eslisez les dandyprattes et les deniers dirlande hors de la reste*'.⁴

¹ Summarized in *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, ed. J. S. Brewer, II. i (1864), no. 1972, but the expanded text given here is from an abstract kindly provided for me by Dr. Challis.

² Sir Henry Ellis, *Original Letters Illustrative of English History*, Third Series, I (London, 1846), p. 381. The year does not appear in the document, and the *OED* prefers the less precise 'c. 1520', but Ellis's 1525 is correct. The signature is that of the third duke, not that of the second, who died on 21 May 1524, and the only year Wednesday fell on 29 Mar. at about this time was in 1525. The misleading phrase 'of this

monethe' is presumably due to the letter having been dictated the day before the duke appended his signature and the date.

³ Ellis's text reads 'the dandipratts at the King ded is going ouer to Bullen', which is grammatically nonsense, but Professor G. R. Elton has kindly verified for me the accuracy of Ellis's transcription and proposed the emendation given in the text. The meaning is clear, even if the scribe wrote down what he thought he heard without troubling to make sense of it.

⁴ Palsgrave, fo. 198^r; ed. F. Génin (Paris, 1852), p. 498.

4. A passage in a letter of R(ober) R(oth) to his son David, dated 10 October in a year which various allusions to third parties show to have been between 1530 and 1535, which refers to £10 in gold and current coin sent by the bearer, with a promise of 20s. more in 'Irish groats and dandiprats' to be sent before Easter.¹ Robert Rothe was the head of a prominent Kilkenny family, and the letter was written to his son in England.

5. Robert Recorde, in his *Ground of Artes*, a treatise on arithmetic which proved one of the most successful textbooks of its kind and went through a long series of editions in the sixteenth and seventeenth centuries, includes a list of English coins, from the sovereign down to the farthing, with their values. In the first edition, that of 1543,² the list is given on fo. 65^v. and expanded as follows on fo. 67^r.:

In sylver, the greatest is a Grote, which containeth 4 pennies. Then is an other Grote called an Harpe, which goeth for 3d. Then next, is a penny of 2d, and then a dandyprat worth thre half penies. Nexte it a penny, then a halfpenny, and last and least of all a farthyng, whose coyne is on one syde a crosse, and on the other a purculles.

It is not necessary to carry the story any later, beyond noting that the term dandyprat continued to be used for coins of 1½d. in later editions of Recorde—Elizabeth I struck coins of this denomination between 1561 and 1582—and is elsewhere used in literature.³ The word had by that time come to mean a particular denomination, not a particular coin, and I would suggest that our difficulties over identifying the dandyprats of the first decades of the century result from our failure to realize that this was true even then. A coin that was extremely abundant at Tournai in 1516 cannot have been the same as one common in Ireland in the early 1530s and worth noting by Recorde in 1543. What we have to do with is a series of coins worth 1½d. in English money to which the name dandyprat was successively applied, and which evidently go back to some defective coins

¹ *New Palaeographical Society*, Series II, Vol. ii, Pl. 153. The reading *Roche* there given should be *Rothe*; see *British Museum, Catalogue of Additions to the Manuscripts 1916–20* (1933), pp. 327–8, Egerton 3009A, and G. D. Burtchaell, 'The family of Rothe of Kilkenny', *Journ. Roy. Hist. and Arch. Assoc. Ireland*,⁴ vii (1887), pp. 507 ff. The relevant passage, with modernized punctuation and capitalization, is as follows: 'Ye schall receive of this berrer x li. yn gold and mony of this mony, and by Ester ye schall hawe more, God wyllyng, and ye schall receive xx s. Irys grottis and dandyprattis which y thynke schall stond (?) for Englys mony styd (?) and so we do sett them out in the partys of Brystowe.' Mr. Gilson, in the *Palaeographical Society* transcript, read 'xxs. in ryt grottis', suppling the *n* of 'in', but Dr. Challis and I, after examining the facsimile, are satisfied that the letter before 'grottis' is *s*, not *t*, and that 'irys' is the correct reading. The word 'stond' is not clear: it might be 'serve' which would make better sense. One would expect a figure to follow 'Englys mony', and the meaning of 'styd'—the reading seems certain—is not clear. Irish money, owing to the cross-channel traffic, would presumably have been acceptable in the Bristol region.

² It was formerly supposed that there were earlier

editions in 1540 and 1542, but this is not the case. See J. B. Easton, 'The early editions of Robert Recorde's *Ground of Artes*', *Isis*, lviii (1967), pp. 515–17. The date 1540 arose because in John Dee's edition of 1570 the list of coins taken from earlier ones is headed *anno 1540*. It is now clear that this was only intended as an approximation. Mrs. Easton has misinterpreted (p. 517) one passage, where Recorde says that 'nowe there are 46 pennies in an ounce'. It is not, as she supposes, a value relationship, but one of weight. Nor is it quite correct, for the penny was reduced in 1526 from 40 to 45 and in 1542 from 45 to 48 to the ounce. As for the supposed edition of 1542, this date was merely conjectural, and the unique copy that exists is now attributed to c. 1545 (*ibid.*, p. 516, n. 4).

³ e.g. Edward Hellowes's translation of *The Familiar Epistles of Sir Anthonie de Guevara* (London, 1577), p. 253, in a letter against miserliness, includes the dandyprat amongst small coins likely to be given for common objects: 'if they [i.e. the sellers] aske an halfpence for spice, a penie for candels, a dandiprat for an earthen pot, a farthing for oyle, two pence for salt, he [i.e. the miser] riues the house with yelles, and gives unto the diuell both wife and children, exclaiming that they are all bent to rob him'.

issued by Henry VII in 1492. Recorde's valuation of $1\frac{1}{2}d.$ shows that ones containing 16 or 17 grains of fine silver must have been involved, and in each case except the first the identification can be fairly easily made. It will be convenient to discuss them in reverse order.

The dandyprats of Recorde's manual must have been Irish half-harps, i.e. half-groats, since he both values the Irish harp at $3d.$ and makes no mention of half-harps, though these existed. There was no need for him to use this term, since while there were no coins of $3d.$ current in England there had sometimes been others in circulation which were valued at $1\frac{1}{2}d.$, and the word dandyprat was consequently at his disposal.

The dandyprats of Rothe's letter must also be Irish half-harps, since there is the same linking with Irish groats, and an Irish connection is anyhow implied by the circumstances of the letter. The exact date of the introduction of the harp and half-harp is uncertain.¹ The commission of 6 March 1536 authorizing Ralph Rowlett and Martin Bowes to strike silver coin for Ireland cannot have been the first of its kind, since harps with \mathfrak{h} \mathfrak{T} in the field (for *Henricus* and *Anna*) are too common, and struck by too many dies, to be limited to the two months between that date and Anne Boleyn's downfall in May. Even if they only go back to 1534, however, the letter could well date from October of that year and the new coins be the ones referred to.

Such a solution does not seem to be possible for the dandyprats of Palsgrave's dictionary. It is true that the harps with \mathfrak{h} and \mathfrak{R} in the field were formerly taken as dating from the period in which the king's marriage to Catharine of Aragon was still regarded as valid, but more recent work has shown that the \mathfrak{R} must refer to Catharine Howard. The series consequently did not start before the reign of Anne Boleyn, i.e. not before January 1533. Further, the reference to 'culling' seems to imply that the coins in question were ones which could easily be mistaken for English ones, and this would not have been the case with harps and half-harps. Presumably the coins involved were the much earlier Irish half-groats of Henry VII's reign, which were lighter in weight than their English counterparts and would by 1530 be worn and in poor condition. Their issue had ceased some twenty-five years earlier, but no coin had been struck in Ireland during the intervening period, so that, mixed with English imported coin, they must still have formed a substantial part of the circulating medium.

The dandyprats of 1516 cannot have been either coins of 1492 or Irish half-groats, for the first would not have been available in 1516 in the quantity envisaged in the Jerningham memorandum and the latter would scarcely have circulated at Tournai. The most obvious hypothesis is that they were the first of the two types of Tournai 'groat' struck by Henry VIII, the one bearing the date 1513 and having on them a crowned shield and an elaborate cross.² Since these coins are continental in design one might assume them to have been struck in poor quality billon, which would explain the complaint of the moneyers regarding the loss involved in their melting. A semi-quantitative analysis of the three specimens in the British Museum, however, gives them a fineness of 90 per cent \pm 10 per cent, and the same figure is found for the portrait groats, which are known to

¹ For what follows, see R. Carlyon-Britton, 'Henry VIII Harp Groats and Harp Half-groats and Edward VI Harp Groats', *NC* 1954, pp. 134-40, and M. Dolley and W. D. Hackman, 'The Coinages for Ireland of Henry VIII', *BNJ* xxxviii (1969), pp. 84-108.

² M. Hoc, *Histoire monétaire de Tournai* (Brussels,

1970), p. 132, nos. 204-7. They were slightly heavier than English groats, and presumably intended as a different denomination. Hoc's collection of material (pp. 126-34) needs to be complemented by the account of the mint in C. G. Cruickshank, *The English Occupation of Tournai 1513-1519* (Oxford, 1971), pp. 137-42.

be of sterling silver.¹ The non-portrait groats cannot therefore be the dandyprats of the memorandum.

The likelihood, in fact, seems to be that these coins were not English at all. The document does not say that they were, and it would have been quite natural for the garrison to be paid in some foreign coin acceptable in the town where the troops were quartered and in the surrounding region. This was the practice at Calais at the time of the Cely Papers, when the garrison was normally paid in Flemish double patards.² The memorandum shows that the dandyprats were officially valued at 2*d.* but actually worth less. The alternatives seem to be that they were either French blancs à la couronne (douzains), appropriate to a French town but not particularly useful in the countryside around, or Low Country patards. The French coins weighed 2.85 g. = 44 grains but were only 358/1000 fine,³ so their silver content was 1.02 g. or 15.7 grains. This is very close to the 16/17 grains one would expect for a value of 1½*d.*, and the weights of English half-groats were in any case so irregular, and often so low, that the valuation of the douzain at 1½*d.* would be a quite likely one. On the other hand, the weight and fineness of this denomination had been stable for many years, and even at its best, three-quarters of a century earlier under Charles VII, its silver content had only been 1.22 g. = 18.8 grains,⁴ so it is difficult to believe that it could ever have been accepted at 2*d.* The first type of double patard of Charles the Bold, however, that issued from 1467 to 1474, had had a weight and fineness which justified its being allowed to circulate in England as the equivalent of a groat,⁵ and the corresponding patard would thus have been valued at 2*d.* The patard of the early years of Charles V, however, was lighter and baser, weighing 3.10 g. and being only 319/1000 fine,⁶ so that its silver content was 0.99 g. or 15.3 grains. The difference between it and the douzain was thus very small, but the patard was the successor of a coin once worth 2*d.* and one can understand the government attempting to assert this as its official value, though in ordinary commerce it would pass for less. On present evidence, therefore, it looks as if the dandyprats of 1516 were patards of the Low Countries.

There is, finally, the identity of the dandyprats of 1492, and for this I have no satisfactory solution to propose. The reference to the Boulogne expedition (6 Oct.–17 Nov.) might suggest that they were some kind of obsidional coin, but although this possibility cannot be ruled out, none are known for the siege of the town (8 Oct.–8 Nov.) and it is not in any case likely that such coins, if they had been struck, would have provided a name for subsequent 1½*d.* pieces. It is equally unlikely that Howard's memory would

¹ Mint instruction of 8 Mar. 1514 in *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, 2nd edn., by R. H. Brodie, ii, 2 (1920), App. 27, p. 1557, but correcting the date of 7 Mar. to 8 Mar. (Cruickshank, 138–9). Hoc gives the weight of the half-groat incorrectly as 0.75 g. = 11.5 grains, instead of 19.5 grains.

² *The Cely Papers*, ed. H. E. Malden (1900), no. 96, of 13 Aug. 1482. See the comment in my article, 'Coinage in the Cely Papers', *Miscellanea Mediaevalia in memoriam Jan Frederik Niermeyer* (Groningen, 1967), p. 393.

³ J. Lafaurie, *Les Monnaies des rois de France. I. Hugues Capet à Louis XII* (Paris-Bâle, 1951), nos. 605, 611.

⁴ *Ibid.*, no. 514.

⁵ H. Enno van Gelder and M. Hoc, *Les Monnaies des Pays-Bas bourguignons et espagnols 1434–1713* (Amsterdam, 1960), no. 23, but the fineness is given incorrectly as 798/1000 (= 10*d.*). It was really 11*d.* (= 878/1000), and as the coin weighed 3.16 g. its silver content was 2.77 g. This was virtually identical with that of the English groat, which contained 44.4 grains = 2.88 g. silver. On the circulation of the double patard in England see Spufford's article cited below, p. 88, note 3.

⁶ Van Gelder and Hoc, *op. cit.*, no. 172. Henry VIII's first type of Tournai 'groat' was modelled on this coin.

have been at fault in the matter, for although he himself had been only a young man in 1492 he was something of a specialist on French affairs, and his father had been Lord High Treasurer from 1501 to 1522. The implication seems to me that Henry VII had a large consignment struck of half-groats of inferior fineness or low weight—their name, with its suggestion of smallness, suggests the latter—with the intention of unloading them on unsuspecting Frenchmen, who would have no standard for comparison and might consequently be ready to accept them at their face value. In England they would obviously have a less easy passage, and ultimately have attributed to them a conventional value of $1\frac{1}{2}d.$ But I have found no contemporary evidence for the circulation of half-groats at $1\frac{1}{2}d.$, and the condition of Henry's surviving coins of this denomination is so deplorable—they are as a rule badly clipped—that one can hardly see how specimens deliberately struck under weight could have been distinguished from the others. It is possible, of course, that half-groats were intended to be covered by the coinage Proclamations of 5 September 1497, 12 December 1498, and 16 January 1499, although these refer only to 'pence'.¹ The Proclamations order the king's subjects to accept at their face value coins which are 'small and light in weight', as well as those which are old, worn, or clipped, and Ruding,² in discussing this phrase, points out that since they are expressly stated to be of the king's own coinage their thinness must be taken as evidence of deliberate malversation, since Henry had reigned for too short a time for it to be due to wear.

The origin of the word dandyprat remains unexplained. Presumably the coins were so called because they were inferior to others ostensibly of the same value, but how a dwarf came to be called a dandyprat is unknown. There seems to be no connection with *dandy*, a word not found before the late eighteenth century.³ Mr. Richard Falkiner informs me that *donnyprat* is used in the north of England for a child's hand, i.e. something small, e.g. in such a phrase as 'Go and wash your donnyprats', but the standard dialect dictionaries only know *donny* or *danny* in this sense, without the suffix *-prat*, and the origin of *danny* is in any case unknown.⁴ In view of the earliest purpose of the coins one might expect a French origin, but I am unable to suggest anything which, even allowing for the English capacity to deform foreign words, would result in anything that resembles it. I am inclined to wonder if it may have been the personal name of a dwarf in some romance of the late fifteenth or early sixteenth century, but such experts in the literature of that period as I have consulted have not been able to make any suggestions.

2. ERASMUS'S LEAD TOKENS

'A very important development at the beginning of the sixteenth century was the appearance of the *token*. The earliest of these were in lead or pewter and we first hear of them through Erasmus, in his *Adagia*, printed in Paris in 1500. In this he speaks of *Plumbeos Angliae* as being in general circulation in England at this time, and there can be no doubt that it was to these leaden tokens that he was alluding.'

¹ P. L. Hughes and J. F. Larkin, *Tudor Royal Proclamations*, i (New Haven, 1964), nos. 38, 42, 43 (pp. 41 ff.). The coins envisaged in a fourth Proclamation of 23 Mar. 1499 (no. 44) can only be pence.

² *Annals of the Coinage*, i. 295-6.

³ *OED*, s.v. DANDY. It may be abbreviated from *Jack-a-dandy*, attested from the seventeenth century.

⁴ Wright, *English Dialect Dictionary*, s.v. DANDY (sb.²), danny.

So the late Mr. Peck in his great catalogue,¹ the reference being presumably taken from Snelling via Ruding² and Erasmus's reliability being buttressed by the information that he visited England in 1497 and 1499. This, it should be said at once, is wholly irrelevant, since *plumbei Angliae* are not referred to in the 1500 edition of the *Adagia* at all. Erasmus's note occurs only in much later editions, and was made towards the end of his life. The precise reference is not very easy to trace, since versions of the *Adagia* are numerous and their indexing is erratic. It is worth trying to get the record straight.³

The first edition of Erasmus's collection of proverbs, with supporting citations and commentary, was published at Paris in 1500 under the title *Adagiorum Collectanea*. It is a short work of only 150 pages, containing rather over 800 *adagia*, and is unindexed. I have not seen the original edition, but have been through the Paris reprint of 1506/7, and neither this nor any of the later ones I have consulted make any reference to *plumbei Angliae*.

In 1508 the *Collectanea* were not so much replaced as supplemented—it went on being published as a separate work—by a new and enormously expanded volume entitled *Adagiorum Chiliades*, 'Thousands of Sayings' (Venice, Aldus Manutius). This contained 500 folio pages and over 3,000 sayings, with long commentaries on them. No. 3640 (Chil. III, Prov. DCXL), on fo. 223^r, entitled *Ne nummus quidem plumbeus*, is an entry of three lines. *Nummus plumbeus* is described as an exaggerated expression for a coin of little value, with a reference to the use of the term by Plautus in his *Casina* (line 258). There is no reference to English lead coins.

In 1515 a revised and expanded edition of this, with the title altered to *Proverbiorum Chiliades*, was published by Frobenius at Basel. It contained (p. 541) the same heading and reference, but the numbering has been changed to 3752 (Chil. III, Cent. VII, Prov. LII), which it was to retain in subsequent editions and reprints. In the 1526 (Basel) edition, the title of which has now become the familiar *Adagiorum Opus*, the entry (p. 731) was slightly expanded by the insertion of a second reference, that to a mention of *plumbeus nummus* in Plautus' *Trinummus* (line 962). This revised wording was retained in later editions. There is still no reference to English lead coins.

The reference to *plumbei Angliae* in fact occurs not under this heading, where one would expect it, but under a subsequent one added as an afterthought in the fifth 'thousand' in the Basel edition of 1533. This includes as Chil. V, Cent. I, Prov. IX (p. 1051) the rubric *Nummus Plumbeus*, which cites for the second time the two passages from Plautus and then adds *Aereos nummos et hodie novit Flandria, plumbeos Anglia*, 'Nowadays Flanders is familiar with copper coins,⁴ England with lead ones.' Though the repetition of the headings is clumsy—Erasmus, though his powers of work were still

¹ C. Wilson Peck, *English Copper, Tin and Bronze Coins in the British Museum 1558–1958* (2nd edn., London, 1964), pp. 5–6.

² Ruding, *op. cit.*, i. 301, n. 3, quoting T. Snelling, *A View of the Copper Coin and Coinage of England* (London, 1766), p. 2. Snelling cites Wechel's printing of the *Adagia*, 1639 (*recte* Frankfurt am Main, 1629), p. 130, and the reprint in Erasmus's collected works (*Opera omnia* [Leyden, 1703], ii. 1183).

³ For what follows I have been greatly helped by the invaluable *Bibliotheca Erasmi*. *Bibliographie des œuvres d'Érasme. Adagia* (Ghent, 1897), by F. van

der Haeghen and others, and by Mrs. M. M. Phillips's *The 'Adagia' of Erasmus: a Study, with Translations* (Cambridge, 1964). I am indebted to the kindness of the librarians of the Bodleian and of Christ Church and Corpus Christi College, Oxford, for verifying references to editions of Erasmus not available in Cambridge.

⁴ This is technically incorrect, since coins of pure copper were only introduced in Flanders in 1543, but Flemish 'black money' was so deficient in silver content that the coins looked like copper and were commonly regarded as such.

prodigious, was feeling the effects of age—the reference to the English tokens is easily explained. In 1529 he had left Basel for Freiburg-im-Breisgau, and it was over the next four years that the new edition was being prepared. We know from his correspondence, and from allusions in the edition itself, that English affairs, and in particular the fortunes of his English friends, were much in his mind. The 'King's great matter', that of the divorce, had been openly broached, and the preface to the 1533 edition includes a moving tribute to one of his dearest friends, Archbishop Warham of Canterbury, who died on 22 August 1532. 'Working on the *Adages* had brought vivid memories, of the archbishop's library and his enthusiastic encouragement, and that kindly deeply-lined face which Holbein drew.'¹ The reference to *plumbei Angliae* represents one more recollection of his life in England during his stay of 1508–13. Since even official price regulations provided for fractions of less than a farthing,² the smallest coin struck by the Mint, these tokens served an obviously useful purpose.

3. THE PROCLAMATION OF 5 JULY 1504 AND ITS IMPLICATIONS

The Proclamation on clipped coin of 5 July 1504 is one of the very few English monetary records of the period that are illustrated, three coins being shown in the right-hand margin of the only known printed copy, that in the library of the Society of Antiquaries. It has been several times reproduced in facsimile; by the Society of Antiquaries itself;³ by Raymond Carlyon-Britton in his study of the coinage of Henry VII;⁴ and by Hughes and Larkin in their recent corpus of Tudor Proclamations.⁵ The coins are a Henry VII groat with arched crown and greyhound's head mark, a Flemish double patard of Duke Charles the Bold, and a second Henry VII groat with cross-crosslet mark. Carlyon-Britton argued that the illustrations were later in date than the main text of the Proclamation, since the coin with the cross-crosslet mark has an incomplete outer circle and thus violated the terms of the Act of 19 Henry VII, cap. 5, which ordered that coins should be struck with an outer circle to make clipping impossible. Mr. Potter quite rightly rejects this view.⁶ A proclamation was a very ephemeral thing, and the only point of illustrating it would be to show coins in actual circulation. Mr. J. C. T. Oates, an expert in early typography whom I have consulted, assures me that on technical grounds it would have been impossible for the wood-cuts to have been added later.

Mr. Potter's further view, however, that the imperfect form of the cross-crosslet groat is a consequence of defective printing, seems to me to miss the point of the illustrations. The matter is of some importance, since it suggests that his dating of Henry VII's coinage is on some points open to question.

The Proclamation was intended as complementary to the Act against clipping (19 Hen. VII, cap. 5) of the Parliament of 25 January 1504.⁷ The Act itself cannot be

¹ Phillips, *op. cit.*, p. 153. This edition, as Mrs. Phillips points out (pp. 154–7), is full of early memories.

² Cf. R. W. Heinze, 'The Pricing of Meat: a Study in the Use of Royal Proclamations in the Reign of Henry VIII', *Historical Journal*, xii (1969), p. 586. There is now an extremely valuable study of such 'coins', and of their use, by W. J. Courtenay, 'Token Coinage and the Administration of Poor Relief During the Late Middle Ages', *Journal of Interdisciplinary History*, iii (1972–3), pp. 275–95.

³ Tudor Proclamations. *Facsimiles of Proclamations*

of Henry VII, Henry VIII, Edward VI, and Philip and Mary, now in the Library of the Society of Antiquaries (London, 1897), No. 1.

⁴ 'The Last Coinage of Henry VII', *BNJ* xviii (1925–6), pp. 57–8 and unnumbered plate.

⁵ *Tudor Royal Proclamations* (above, p. 85, note 1), No. 54, pp. 60–1, and Pl. I.

⁶ W. J. W. Potter and E. J. Winstanley, 'The Coinage of Henry VII', *BNJ* xxxii (1963), pp. 155–6.

⁷ *Statutes of the Realm*, ii (1816), pp. 650–1.

precisely dated. The Parliament was still in session on 12 March, since one of its Acts gave approval to an indenture of this date between the king and the abbess of Sion,¹ and it can be deduced from payments to members which are known from local records that it was formally dissolved on 30 March.² But its proceedings, as recorded in the Rolls of Parliament, are not dated beyond 29 January—there is nothing unusual in this—and neither the Parliament Roll nor the Statute Roll necessarily preserves the precise order of business. The Act regarding clipping, *Pro reformatione Pecuniarum* as the Parliament Roll terms it, must belong to either February or March, but we cannot go further than that.

The terms of the Act are simple. It laid down, as many acts before it had done, that coins which were only reasonably worn or were cracked should be allowed to pass current, but that clipped coin should not. In one respect it went further than its predecessors. In order to prevent clipping in the future, new groats and half-groats were being introduced which had a circle outside the inscription, and this must be perfect if specimens were to be considered unclipped. The wording is as follows:

And in eschewyng and avoydyng of such clippyng in tyme to come, The Kyng our Soverayn Lord by thadvyce of his Counseill hath causid to be made newe Coynes of grotes and pens of too pens, And that every pese of the same Coynes shall have a sercle about the utter part therof . . . to thentent that his subgettis hereafter may have perfite Knowledge by that sercle . . . when the same Coynes be clypped or appayed.

This left two matters uncertain, what the new coins with circles looked like and how the public could decide, amongst the older coins, which were clipped and which were not. The Proclamation provided the necessary information, the criteria which it laid down being described and illustrated. It was necessary to take account of two classes of English groat and of Burgundian double patards, which were legal tender in England as groats.³ The three types of coin were as follows:

1. Groats 'coyned before the makynge of the sayd act', which are to be regarded as unclipped provided they have 'thre poyntes of the crosse hole on the [one] syde And the most parte of the scripture hole on the other syde'. This definition was a reasonable one, for while clipping could leave three ends of the cross intact, it could not go far without affecting the obverse inscription. The point is made by the illustration of a cross-crosslet groat with three ends of the cross on the reverse intact and the obverse inscription legible, only the tops of a few letters being missing.

2. 'grotes newe coyned sythen the makynge of the sayd acte, whiche newe grotes shall not be curraunt onles they haue theyr full prynte on both sydes accordynge to the sayde acte' [my italics]. Here the illustration is of a greyhound's head groat, with the inscriptions and outer circles on both sides intact.

3. Any 'double placke' shall be current which 'hath his scripture apparaunt on the one syde or on the other syde'. Here there was no possibility of using cross-ends as a criterion, since there was no long cross in the design, and the coin illustrated as being current is so because the outer circle and inscription are complete on one side, even though those on the other are slightly damaged.

¹ *Rotuli Parliamentorum* (n.d., c. 1783), vi. 527.

² *History of Parliament. Register of the Ministers and of the Members of both Houses 1439-1509* (London,

1938), p. 597; cf. p. 608, n. 1, p. 609, n. 2, p. 610, n. 2.

³ P. Spufford, 'Burgundian Double Patards in Late Medieval England', *BNJ* xxxiii (1964), pp. 110-17.

If this interpretation of the illustrations is correct, and it is difficult to gainsay it, its chronological implications are disturbing. The groats with greyhound's head were introduced *as a consequence* of the Act of the Parliament of 25 January 1504, and the cross-crosslet ones, which are illustrated as examples of the earlier groats and by inference represent the last issue of the previous dispensation, ended at the same time. Mr. Potter supposed that the greyhound's head groats were those current in January 1504 and indeed were then nearing the end of their period of issue, which he places conjecturally at the end of March 1504. The implications of the Act and Proclamation combined are quite contrary to this. The cross-crosslet groats should have been struck up to the passing of the Act and the greyhound's head groats only after it. The portrait groats, further, would not seem to have been in normal circulation at the date of the Proclamation.

Such an interpretation seems to contradict two views very generally held by scholars who have worked in the field. One is that the greyhound's head groats preceded the cross-crosslet ones—Mr. Potter dates the two groups 1502–4 and 1504–5 respectively¹—and the other is that the profile head groats started, at least as an experimental issue, in the opening months of 1504.

The accepted order of issue has been determined partly on the evidence of the privy marks, partly on the details of the crown and of the cross on the reverses, and partly on the evolution of certain letter forms.² That any proposed arrangement involves difficulties and contradictions has been admitted in turn by Carlyon-Britton and by Potter and Winstanley. While mint indentures continued to attach great importance to privy marks and prescribe their use, surviving coins make it clear that reverse dies with obsolete marks, and perhaps obverse dies as well, were commonly retained in use after their legal term had expired, so that muling between marks is sometimes frequent. Punch sequences might seem a firmer basis for reasoning, but my personal opinion is that too much weight is attached to them. An engraver must often have had an accumulation of punches on which to draw, and since they wore out unevenly and he had no good reason for preferring one to another the lettering on the coins is mixed and die-sequence and punch-sequence do not necessarily correspond. Nor will all the alleged cases of muling stand up to examination. The 'anchor' die in the anchor/greyhound's head mule which on paper should make them consecutive classes is in fact a die with no privy mark at all,³ and while it may indeed go back to the 'anchor' period it could well, because of its non-committal character, have been brought back into use at a substantially later date. This is not the place, however, for a full examination of the problem. My object is only to point out that the most natural interpretation of the Proclamation of 1504 goes against the accepted sequence of privy marks, and is evidence of which students of the coinage must take account.

4. THE ORIGIN OF THE PORTRAIT GROATS

The Proclamation of 5 July 1504, by its silence, throws some light on the origin of the portrait groats. The three authorities normally cited for their introduction are Fabyan, Holinshed, and Stow,⁴ but Holinshed and Stow wrote much later and do no more than copy Fabyan, so their testimony must be disallowed. To Fabyan's evidence, however,

¹ 'The Coinage of Henry VII. Chapter IX', *BNJ* in *BNJ* xxx (1961), pp. 286 ff.; xxxi (1962), pp. 109 ff. xxxii (1963), pp. 156–8.

² *BNJ* xxx (1961), p. 286.

³ The evidence is set out by Carlyon-Britton, art. cit., p. 24 and pp. 30 ff., and by Potter and Winstanley

⁴ Cf. Potter, art. cit., p. 157.

there can be added that of Polydore Vergil, an Italian who took up residence in England in 1502 and wrote a history of the country which virtually created the standard pattern of interpretation for Tudor history for many centuries to come. His account is brief. 'At that time'—Vergil, in the best classical tradition, avoids precise dates—'Henry held in London a Parliament of his nobles in which, after legislating on many matters concerning the good government of the realm, he obtained a general tax. In the same parliament it was ordained that the silver coins, called 'groats', which had been clipped round the edges, should no longer be used, but that new ones should be minted on which the image of Henry should be impressed.'¹ Although Polydore Vergil was in England at the time, however, his account is not strictly contemporary, for he has displaced the date of the Parliament by a year—it is associated with events of January–March 1503,² not January–March 1504—and his linking of events could have been borrowed from Fabyan, the first draft of whose work he seems to have used. On the other hand, he had a professional interest in coinage—he was a collector of papal taxes, and indeed was prosecuted before the Barons of the Exchequer in June 1504 on a charge of operating an illegal exchange in London³—and his memory on this point may not have been at fault.

Robert Fabyan, a London alderman of antiquarian tastes who died in 1513 and compiled a chronicle which exists in several forms, is a more important source. Fabyan's interests were in part national, in part local: the succession of aldermen, fires in the City, public executions, and suchlike topics. His precision is not always matched by his accuracy, and he can often be faulted over small details in names and figures. The contemporary sections in his work are based partly on Guildhall and other records, printed or manuscript, which he could consult, partly on notes made at the time the events happened, and partly on memory. Three versions exist of the part of the work that concerns us. One is the text printed in 1533 by William Rastell. This added a section covering the reign of Henry VII to the first edition of the chronicle, which had been published in 1516, after Fabyan's death, and ended in 1485. It is the version normally cited. A second version, very brief and for our purposes unimportant, is in British Museum MS. Cotton Vitellius A.xvii. The third and longest version, which now goes under the name of *The Great Chronicle of London*, was only published in 1938.⁴ It is a fair copy, probably made

¹ 'Per idem tempus Henricus habuit Londini suorum procerum concilium, in quo post multa super statum regni bene ordinando, statuta, obtinuit a populo tributum. In eodem concilio sancitum est ut nummi argentei, quos vocant grossos, tonsura diminuti in usu amplius non essent, ac novi cuderentur, in quibus regis ipsius Henrici facies sculpta est' (*The Anglica Historia of Polydore Vergil A.D. 1485–1537*, ed. and transl. D. Hay [1950], p. 132). I owe this reference to Dr. Challis. Although the first edition of the work was not published till 1534, the manuscript used by Hay was written in 1512–13 and covers events up to 1513. Polydore apparently began to collect material and put this in order c. 1506.

² The passage continues by saying that 'meanwhile' (*interea*) Queen Elizabeth gave birth to a daughter and died and was buried shortly afterwards, while at about the same time (*per eosdem dies*) Henry Dean, archbishop of Canterbury, died. The birth of Catherine took place on 2 Feb. 1503, the queen died on 11 Feb.

and was buried on the 23rd, and the archbishop died on the 15th.

³ He seems to have done no more than cash some substantial bills of exchange for Italian merchants. See D. Hay, 'The Life of Polydore Vergil of Urbino', *Journal of the Warburg and Courtauld Institutes*, xii (1949), p. 137, and I. S. Leadam, 'Polydore Vergil in the English Law Courts', *Trans. Roy. Hist. Soc.*, N.S., xix (1905), pp. 279–94.

⁴ Ed. A. H. Thomas and I. D. Thornley (London, 1938). The introduction to this includes a detailed and authoritative examination of the interrelationship between the various texts and—for an earlier period—others that are now lost. I have assumed the correctness of the editors' conclusions—effectively, Fabyan's authorship of the *Great Chronicle*—in the discussion that follows. A useful summary will be found in C. H. Williams, *English Historical Documents 1485–1558* (London, 1967), pp. 94–5.

in 1512 before Fabyan's death, and it is easy to see that behind it there must have been a rough draft with marginal additions and insertions which were subsequently incorporated in the text.

The printed text of 1533 records, for Henry VII's nineteenth year (22 Aug. 1503–21 Aug. 1504), a feast at Lambeth Palace on 13 November and fires in the City on 21 November and 7 January. It then continues:

Upon the xxv daye of January began a parliament at westmynster. And the xxvii day of March, was an house brent agayn saynt Martyns le graunt. And the same day was hurt done with fyre in the paryshe of saynt Peters the pore. And in the forenamed parlyament was ordeyned a new coyne of syluer, as grotes, half grotes, and shyllinges with half faces. And in the forsayde parlyamente was graunted to the kyng an ayde of xxxvi (*recte xxx*) thousand li. And a correccyon was dyuyd for clipped grotes.¹

Such an account invites an excursion into textual criticism, since the arrangement is distinctly odd. The entries regarding Parliament are separated by a record of fires in the City and those regarding groats by one of an aid granted to the king. The text of the *Great Chronicle* provides an explanation. Since it is not easily accessible, having been published in a limited edition not sold to the public, the passages regarding the coinage may be quoted in full. After relating a series of precisely dated events—the opening of Parliament on 25 January, the deaths of various aldermen on 9 and 19 February and on 15 March, the two fires on 27 March—it continues as follows:

Abowth this tyme were ffyrst opynly shewid newe coynys which the kyng by his parlyament had stablysshid to goo as currant money among his subjectis, That is to say Grote and half Grote which bare but half a fface and the same tyme alsoo was coynyd a Grote which was In valu of xij d. But of these were but ffewe coynyd.

There follows a note on the high price of alum in 'this yere', a change of aldermen on 19 September, an account of the Parliamentary grant, and then a return to the coinage:

And In this florenamyd parlyament was among other thingis providid ffor the common wele, That all grotys not havying ij of the crosse endys hool, and the half scrypture upon that othyr syde shuld be dampnyd and cut In sundyr, and penaltees sett upon all such personys that offird any such Grotys in payment, The whych at the begynnyng was a grete Grudge and losse to the comons, But afftyr It turnyd to theyr grete comffort and ease, and avoydyd moch of the suspectid money of this land.²

These passages make two things clear. The first is that neither are strictly contemporary; they were inserted after the events they describe. The second is that they are not equally authoritative. The account of the remedies for clipping, despite the mistake of *ij* for *iiij*, was probably made after consulting the Rolls of Parliament, to which Fabyan would have had ready access, since this document also inserts the coinage provisions immediately after those regarding the grant to the king. The introduction of the portrait groats, on the other hand, must have been described from memory. The phrase 'about this time' makes this plain, and its separation from the entries regarding the grant to the king and the clipped groats shows that it did not come from the Rolls of Parliament or any other source of comparable authority.

The fact that it is inserted from memory, however, does not mean that it is necessarily

¹ *Fabyans Cronycle Newly Prynted* (1533), ii, fo. ccxxxiii^r; R. Fabyan, *The New Chronicles of England and France*, ed. H. Ellis (1811), p. 688.

² *The Great Chronicle*, pp. 327–8.

incorrect, more especially since Polydore Vergil's recollections ran on similar lines. There is also good numismatic evidence, set out by Carlyon-Britton and by Potter and Winstanley, for a period of overlap between the facing bust groats and the portrait ones. To balance this there is the absence of any reference to portrait groats in the Proclamation of July 1504, an absence which implies that they were not then in general circulation. The explanation may well be that their issue was initially projected as the main remedy for the clipped coinage—so complete a change of type would facilitate the demonetization of the older groats—but that technical or professional difficulties prevented their definitive introduction, and a change of privy mark, coupled with precise legislation regarding the outer circle of beading, was substituted in their place. By July they had not yet come into general use.

This conclusion, which is by no means novel, raises the question of who designed the portrait coins and cut the dies. In 1913 Henry Symonds rescued from oblivion the name of Alexander of Bruchsal as that of the mint engraver who held office when portraiture was introduced.¹ It has, ever since, been taken for granted that Alexander was the artist responsible for the early coins, as well as for the first ones struck under Henry VIII, since he continued to be paid as mint engraver down to Michaelmas 1509. He is entitled, in Symonds's view, to be regarded as 'the father of English medallic portraiture'.

This assumption was in 1913 a reasonable one, despite the absence of any 'medallic' features in the coinage of 1494–1504 which unquestionably belongs to him. It became rather less so with G. F. Hill's publication of a number of documents, supplied by Victor Tourneur, regarding Alexander of Bruchsal's later career. On 4 September 1504 he bought a house in the Zierickstraat at Antwerp, where he set up in business as a goldsmith and was admitted a citizen in 1505/6. He was dean of the guild of goldsmiths in 1527 and died in 1545, leaving a widow and three children.²

The introduction of portraiture in English coinage thus coincided almost exactly with Alexander's move to Antwerp. Symonds assumed that he must have continued to cut the dies between 1504 and 1509, since the letter of 1500 confirming his appointment did not authorize him to appoint a deputy. This was done for his successor John Sharp. The most reasonable interpretation of such a precaution, I suggest, is that it was intended to regularize *de jure* in the future something that had already been taking place *de facto*. Alexander had moved to Antwerp in 1504, while remaining on the royal payroll, and his work was done by private arrangement with some competent craftsman in England. He was apparently in the country, or at least returned to it, immediately after Henry VII's death (21 April 1509), since he received from Henry VIII a verbal approval of the renewal of his contract for six months, but it was not long before some reforming official took steps to bring the anomalous situation to an end. There was no further renewal, and when John Sharp was appointed as the new graver on 12 February 1510, his appointment was backdated to the preceding Michaelmas.

If Alexander of Bruchsal was only formally responsible for the portrait coinage, and was not the actual cutter of the dies, who was? Most probably it was John Sharp. He would have taken over as Alexander's deputy in 1504, and in 1505 displayed his initiative and artistic skill by making the new portrait dies. Such a hypothesis has the advantage of attributing all the dies to the single person whom we know to have cut a high

¹ 'English Mint Engravers of the Tudor and Stuart periods, 1485–1605', *NC* 1913, pp. 351–3, and 'Alexandre de Bruchsell', *ibid.*, 1915, pp. 133–5.

² 'Alexander of Bruchsal', *NC* 1924, pp. 254–60.

proportion of them.¹ It is true that some of the early ones, notably those for the testoons, are of exceptionally fine quality. But one has only to look at Gilbert Stuart's paintings of George Washington to realize that uneven quality does not necessarily imply multiple authorship. Repetition becomes boring, an artist's output is affected by his health or the pressure of other work, he learns how to cut corners. There is certainly no such change in quality in 1509/10 as would imply a replacement of one die-cutter by another at that date.

This is to some extent hypothesis. But it is most unlikely that Alexander of Bruchsal would have been admitted a citizen of Antwerp unless he had taken up permanent residence there, and if he was resident there he can scarcely have been cutting dies in London. We do not, it is true, know exactly when he made the move, but it is likely to have been some months before his plans were so definite that he felt able to invest in a house. John Sharp is known to have been already at work in the Mint before his formal appointment on 12 February 1510, and all I am suggesting is that his actual employment there dates from 1504, not from Michaelmas 1509. A change of die-sinker in 1504 would thus lie behind the introduction of portraiture. It would save us from attributing to Alexander skills and interests which we do not know that he possessed and a place in the history of English art for which there is no real evidence that he is entitled.

5. THE 'GOLD PENCE' OF THE PROCLAMATION OF 1505

A Proclamation of which we possess several drafts, including a manuscript one dated 27 April 1505 and another printed but without a date, come as a climax to several similar proclamations of Henry VII directed against clipping.² Ill-disposed persons are forbidden to 'clyppe, washe,³ batter, boyle or other wyse mynnyshe or enpayre ony coyne' on pain of death, and clipped coin and coin no longer current is to be called in and paid for at 3s. 2d. per ounce. The chief novelty is the announcement that owing to delays at the Mint, a special exchange is being set up at Leaden Hall where the withdrawn coin will be paid for in 'gold' twopences and pence.

Symonds, who knew both the manuscript versions in the PRO containing this passage, explained it as a consequence of the fact that the word penny could still be used in the general sense of 'coin'.⁴ This is true, but such an interpretation is in conflict with the sense of the Proclamation. The essential passage, in the printed version, runs as follows:

[To] the entent that under colour of this exchange . . . no clypped grotes, ne other money before declared not to be couraunt, sholde be uttred eyther by the clyppers (*leg.* keepers) of the sayd exchange or by ony of the kynges subgetes, which purcha(n)ce wolde afferme that they had receyed the same . . . at

¹ Dr. Challis is inclined to regard even this as doubtful, however, since the fact that an office-holder received a salary did not mean that it was actually he who did the work. It is most unlikely, for example, that Thomas Wriothesley, a future Lord Chancellor, cut the dies between 1536 and 1544, and we do not know when the dissociation of office from function began. A professional goldsmith, however, can be given the benefit of the doubt.

² R. Steele, *A Bibliography of the Royal Proclamations of the Tudor and Stuart Sovereigns*, i (Bibliotheca Lindesiana, V. Oxford, 1910), Nos. 49a, 50, 51, and

text in Hughes and Larkin, *op. cit.*, No. 57, pp. 70-4. This follows the only known copy of the printed version (in Cambridge University Library), which apart from the lack of a date is more complete than the MS. versions. The two of the latter which contain the passage referring to 'gold' pence are both in the PRO, one in Privy Seal Bundle 330 and the other enrolled (Patent Rolls, C. 66/595/33[4]d).

³ Hughes and Larkin read *mash*, but *washe*, i.e. with acid, is clear in the printed original.

⁴ Symonds, *art. cit.*, p. 133.

the exchaunge aforesayd. His hyghnes therfore . . . hath prouyded and ordeyned that at the sayd exchaunge there shall none other money be gyuen or payde . . . for clypped grotes or other money thyder to be brought by waye of exchaunge, but onely golde (*leg.* goode) pens of two pens and pens, whereby it may euydently appere to all the kynges sayd subgetes and other, that no clypped grotes nor ony other money not couraunt is payed or shall be payed at the said exchaunge, but onely good and lawfull money lyke as is before specyfied.¹

The emendation and the meaning are both equally clear: for *golde* read *goode*, and everything falls into place. The government is concerned that those found with clipped groats—it was this denomination that was mainly exposed to maltreatment—shall not be in a position to defend themselves by asserting that they had received them from the king's exchangers at Leaden Hall. It proposes to avert this danger by providing that the clipped groats shall be paid for only in unclipped coin. To make doubly sure it lays down that the coin paid out shall consist entirely of half-groats and pence, so that no one could subsequently allege of a clipped groat that he had received it from the exchangers a few days before. We have simply to do with a misprint, probably the result of a dictated text being wrongly heard by a secretary, and we need not trouble ourselves further about the identity of 'gold' twopences and pence in 1505.

¹ The spelling is that of the original, but the punctuation has been modernized.

THE COVENANTERS AND THE SCOTTISH MINT, 1639–1641

DAVID STEVENSON

IN 1637–9 the covenanters wrested control of Scotland from the king in their attempt to obtain redress of religious and other grievances. Their committees or 'tables' became the effective rulers of the country, for the regime of Charles I proved too weak to resist this seizure of power. The king resolved to re-establish his authority in his rebellious kingdom by force, and in the spring of 1639 he assembled an English army on the border ready to invade Scotland. The covenanters raised an army of their own to resist him, imposing taxes and raising loans (voluntary and forced) to support it. By the beginning of June the king had joined his army and invasion seemed imminent. The covenanters now resolved on a new expedient; on 2 June they agreed that 'It is thought fitt that everie man give in his silver and gold work to the coine house to be stricken in money for supplying of the present urgent necessity in entertaining the armie'.¹ All those owning gold or silver plate were to give it up to be coined, and were to be given receipts promising eventual repayment of its value. The coin thus minted would then be used to pay and supply the covenanters' armies. Two days later their committee (afterwards known as the committee of estates) resolved that the coins to be struck should be exactly the same in weight, fineness, and design as those previously struck for the king; by making their coins indistinguishable from those of the king the covenanters ensured that they would be generally accepted and would not be discriminated against as illegally struck. At the same time the committee appointed Captain George Foulis of Ravelston general of the mint;² presumably the previous general, John Acheson,³ refused to serve the revolutionary regime which therefore replaced him. George Foulis had long been connected with the mint. His father (also George) had been master of the mint from 1611 until his death in 1635,⁴ while he himself had long been (and remained) comptroller of the bullion and customer accounts, in which office he was paid out of the mint profits.⁵ As general, Foulis was chief officer of the mint with power to supervise the other mint officers and the working of the mint.⁶

A contract was drawn up between the covenanters (calling themselves the nobles and other commissioners of the committee at Edinburgh, in name of themselves and the three estates of parliament) and John Falconer, who had been master of the mint since 1637, at first (1637–8) jointly with his father-in-law Nicholas Briot and then solely.⁷ Falconer agreed to coin all gold or silver handed in to him by the committee or its nominees, and to return the coin thus struck to them. The contract was to last as long as the committee thought expedient and, while it lasted, Falconer was not to coin any other

¹ G. M. Paul (ed.), 'Fragment of the Diary of Sir Archibald Johnston, Lord Wariston, 1639', *Wariston's Diary and Other Papers* (Scottish History Society, 1896), pp. 56, 57.

² R. W. Cochran-Patrick, *Records of the Coinage of Scotland* (Edinburgh, 1876), ii, 112.

³ Patrick, *Records*, i, xxii.

⁴ *Ibid.* i, xxiv.

⁵ Scottish Record Office [SRO], E.101/3, Accounts of George Foulis, Master of the Mint, 1611–27; SRO, E.101/5, Account of John Falconer, Master of the Mint, 1639–41 (printed below). See J. K. R. Murray, 'The Scottish Gold and Silver Coinages of Charles I', *BNJ* xxxix (1970), p. 126.

⁶ Patrick, *Records*, i, xxii.

⁷ *Ibid.* i, xxiv.

money.¹ When coining under this contract began is not certain; Falconer's account begins on 6 June but this may be the date of his contract (the printed copy of which lacks an exact date) rather than when coining commenced. Within a few weeks a treaty with the king was signed ending the 'First Bishops' War', greatly reducing the urgency of the covenanters' need for money. In this short space of time little silver and gold can have been collected for coining, and it seems likely that collection was suspended once the treaty was signed and the king withdrew his army from the border. Thus it seems probable that little coining was done until 1640 when the need for money revived as the covenanters moved towards a new war with the king.

New orders for collecting and coining silver and gold were given by the committee of estates on 15 July 1640. The magistrates in burghs and the committees of war in the shires were to call before them any persons thought to own gold or silver plate, to make inventories of what they owned and to take possession of it. As in 1639, promise was to be given for repayment, but it was now conceded that those who wished to retain their silver work could instead lend to the state its value in coin. Any gold or silver found to have been concealed by its owners was to be confiscated without promise of repayment.² The minute book of the committee of war of Kirkcudbright records gold and silver handed in and its form and weight. Silver spoons and odd bits and pieces of silver were most common. Altogether the Kirkcudbright committee forwarded to Edinburgh for coining in August and September 1640 just over one stone two pounds of silver plate, about one and three-quarter pounds of it being of English plate which was of greater fineness than the Scots.³ Orders of the committee of estates in November urged renewed diligence in sending silver work to Edinburgh and the Kirkcudbright committee promised to send any more it could find,⁴ but its minute book records no more as dispatched before it ends in January 1641. Meanwhile the invasion of England by the covenanters' army in August 1640 had opened up a new source of metal for coining. In September it was reported that the Scots were sending all the silver plate they could lay their hands on in northern England back to Scotland to be coined.⁵

Falconer continued to strike coin at the mint for the covenanters until 22 April 1641. By that time the crisis that had led them to take control of the mint was over; negotiation of a peace treaty with the king and the English parliament was well advanced. Three auditors were appointed (presumably by the committee of estates) to scrutinize Falconer's accounts as master of the mint during the twenty-two months he had worked for the covenanters—William Rig of Atherny (one of the commissioners for Fife in the 1639-41 parliament), John Binny (a burghess of Edinburgh), and Robert Drummond. They completed their audit on 14 July.

Apart from an account for 1632-3 no seventeenth-century Scots mint accounts have been published, and the 1632-3 account is far from typical. It deals only with the copper coinage of these years, struck at the mint for the earl of Stirling by virtue of a patent from the king. The account is evidently rendered by (or on behalf of) the earl of Stirling, but who it was rendered to is not clear.⁶ It thus differs greatly from the normal mint accounts

¹ Patrick, *op. cit.*, ii, 112-13.

² *Minute Book kept by the War Committee of the Covenanters in the Stewartry of Kirkcudbright in 1640 and 1641* (Kirkcudbright, 1855), pp. 21-5.

³ *Ibid.*, pp. 30, 34, 39, 41, 43, 44.

⁴ *Ibid.*, pp. 100-1, 138.

⁵ W. C. and C. E. Trevelyan (eds.), *Trevelyan Papers, part iii* (Camden Society, 1872), p. 194, cited in M. James, *Social Problems and Policy during the Puritan Revolution* (London, 1930), p. 38.

⁶ R. B. K. Stevenson, 'A Mint Account 1632-3', *Scottish Historical Review*, xlvii (1968), pp. 199-202.

of the time, which are the accounts of the master of the mint to the king's treasurer for the part of the mint profits due to the king.

In the account printed below John Falconer accounts as master for the king's profits, but to the committee of estates and not to the treasurer. The account is otherwise identical in form to the master's accounts to the treasurer in 1611-27 (the accounts for 1627-39 have not survived), except that in the earlier period he rendered a detailed account of silver bullion payable by merchants as well as the general account of the king's profits,¹ and no such bullion account for 1639-41 is known. Falconer's account (printed in full at the end of this article) may be summarized as follows:

CHARGE

Charge of gold			
Profit	£398	15	6
Remeids of gold light	£37	16	9
Total	£436	12	3
Charge of silver			
Profit on bullion silver	£1,597	3	4
Profit on other silver	£3,238	4	2
Remeids of silver light	£116	10	7
Total	£4,951	18	1
Total charge	£5,388	10	4

DISCHARGE

Profit on His Majesty's plate	£357	4	4
Repairs to cunziehouse	£853	5	4
Fees to George Foulis	£1,833	6	8
Essays of gold	£72	12	0
Essays of silver	£82	16	0
Warden's coals	£12	0	0
Paid to William Meget, smith	£1,556	0	0
Remeids of silver heavy	£22	4	4
Interest on money borrowed	£1,066	13	4
Total discharge (to this point)	£5,856	2	0

Officers' Fees, 1 June 1639-1 April 1641

George Foulis, General	£1,008	6	8
James Bannatyne, Warden	£385		
Thomas Glen, Counter Warden	£220		
Charles Dickinson, Sinker of the Irons	£366	13	4
Andrew Balvaird, Assayer Depute	£220		

¹ SRO, E. 101/3. Earlier mint accounts vary in form, e.g. E.22/20 (1578-80), E.101/2 (1582-1606). On at least one occasion the whole of the mint profits, the master's as well as the king's, appears in the master's Charge (E.22/20), while sometimes payments normally included in his Discharge appear in the treasurer's

accounts (e.g. Patrick, *Records*, i. 244-9). The only Scots mint master's account in print is that for 1582-3 (ibid., ii. 313-17). For some seventeenth-century accounts see R. W. Cochran-Patrick, 'Note on Some Mint Accounts of the Coinage of Scotland after the Accession of James VI', *NC* 1879, pp. 66-73.

John Rankin, Temperer of the Irons	£220			
Total of officers' fees		£2,420		
Paid to Charles Dickinson	£27			
Paid to David Sey, wright	£16	4	0	
		Total discharge	£8,319	6 0
		Total charge	£5,388	10 4
The account is superexpendit			£2,930	15 8

As is usual in Scottish accounts, Falconer's is divided into Charge and Discharge. The Charge comprises all sums for which the person accounting is accountable, whether he had actually received them or not; in this case Falconer did receive all the items in the Charge and it consists therefore simply of his receipts. The Discharge comprises the accountant's explanation of how he has spent or otherwise disposed of the money he is accountable for, together with any sums included in the Charge which he has not received. There are no such items in Falconer's account (obviously, since all the Charge was received), so its Discharge corresponds with his expenditure.¹ If the Charge exceeded the Discharge a surplus remained in the accountant's hands, the 'rests'. In mint accounts these are normally payable to the treasurer or are transferred to the master's next account as part of its Charge. When the Discharge exceeded the Charge (as in the 1639-41 account) the accountant is 'superexpendit' or out of pocket by the amount concerned, which may be transferred to the Discharge of his next account.

In the accounts of the masters of the mint the Charge was normally made up of the king's proportion of the mint profits plus one very minor item, the 'remeids' of light coin. In the striking of coins there were inevitably minor deviations in individual coins from the standard of weight and fineness stipulated, and it was necessary to define the margins within which such fluctuations were permissible. These margins or tolerances were the remeids or remedies. In Scotland at this time the remeid of weight for the two smallest silver denominations was 13s. 4d. per pound weight²—a pound of silver should have coined £48. 13s. 8d. Scots and had to coin within 13s. 4d. of that sum to be acceptable. But fluctuations within these limits in the normal working of the mint naturally affected the mint profits. If the coins struck were too light (though within the remeids) so that more was coined per pound weight than the mint needed to issue in coin and retain for its profit, then an extra profit was made. This was due to the king and appears in the Charge side of the mint master's accounts, while remeids of coin heavy (reducing the profit) appear on the Discharge side.

The profit, tale, or seignorage was the duty levied by the king on gold and silver coined in his mint to cover the expenses of coining and perhaps to leave a surplus for his own use. The profit was made by retaining in the mint a fixed proportion of the coin struck, and this profit was divided between the king and the master of the mint. For the part due to the king the master was accountable, as already mentioned, to the treasurer. Out of the king's profits the master paid the fees of the officers of the mint and other officials

¹ See A. L. Murray, 'The Procedure of the Scottish Exchequer in the Early Sixteenth Century', *Scottish Historical Review*, xl (1961), pp. 99-100.

² Patrick, *Records*, ii. 51. The £ Scots was worth one-twelfth of the £ sterling in the seventeenth century. All sums mentioned below are in £ Scots.

connected with the mint, the cost of tools, of essays of coin, of alterations and repairs to the mint buildings, and of the remeids of heavy coins, as well as interest on money borrowed by the master to provide working capital for the mint. Such items form the discharge side of the master of the mint's accounts. The other part of the profits was that due to the master himself; unlike the other mint officers he had no fixed fee or wage. He was not, apparently, accountable to anyone for his part of the profits though out of them he had to pay the wages of the mint workmen below the rank of officer since they were his servants or employees, while the officers were the king's.

The profit due to the king on gold coined had been fixed in 1604 at 25s. 5d. per ounce, with 6s. 8d. per ounce to the master¹ but in 1611-12 the king's profit had been reduced to 13s. per ounce (though the master's remained as before) in connection with changes in the value of coins.² It is at 13s. per ounce that the king's profits on gold are charged in Falconer's account.

Two different rates of profit were charged on silver; that on ordinary silver and that on silver bullion given in by merchants. Merchants exporting goods from Scotland were legally required to present a quantity of silver bullion at the mint for coining for each consignment of goods, the quantity being calculated according to the volume, value, and type of export concerned.³ This, it was believed, would increase the wealth of the country by forcing merchants to bring back to the country some of the value of their exports in silver instead of other goods. On such silver bullion the profit due to the king (as fixed in 1604) was one-twelfth, or £49. 18s. 2½d. per stone, plus £15 per stone to the master.⁴ On ordinary silver the rates of profit laid down in 1604 were £21. 10s. 8d. per stone to the king and £15 per stone to the master.⁵ As with gold, the king's profit on ordinary silver was reduced in 1611-12 to £10. 6s. 8d. per stone, while the master's was left unaltered.⁶ Thus the profits due to the king in the 1639-41 account for silver bullion are those fixed in 1604, the profits due to him on gold and ordinary silver those laid down in 1611-12.

In the contract of June 1639 the covenanters ordered Falconer to collect profits of 10d per ounce of silver coined (£10. 13s. 4d. per stone) and 13s. per ounce of gold. As to what was to be done with these profits the wording of the contract is ambiguous. It can be read as meaning that the profit on silver was to be paid to the general as the king's due, and that on gold was to be disposed of as the covenanters' committee thought fit; or it may mean that the profit on both was to be paid to the general who would then dispose of them under the committee's supervision.⁷ Nor is it clear whether these profits mentioned in the contract were intended to replace the normal king's profits while Falconer worked for the covenanters, or were to be extra profits over and above those normally due. If the former, then the account shows that Falconer ignored these instructions and continued to calculate the profits at the old rates; if the latter, it is not known whether the extra profit were exacted and, if so, how they were disposed of.

There is only one item in Falconer's account (apart from its being rendered to the committee of estates and not the treasurer) which directly recalls the unsettled period it deals with and therefore has no equivalent in the 1611-27 accounts. The covenanters seized and had coined the king's plate to help finance their resistance to him, yet they allowed the entire proportion of mint profits due to the king on the coining of his plate

¹ Patrick, *Records*, i. 282.

² Ibid., i. 224-5.

⁴ Patrick, *Records*, i. 283; SRO, E.101/3.

³ S. G. E. Lythe, *The Economy of Scotland in its European Setting, 1550-1625* (Edinburgh, 1960), p. 103.

⁵ Patrick, *Records*, i. 283.

⁶ Ibid., i. 224-5.

⁷ Ibid., ii. 112-13.

to be paid to his treasurer, the earl of Traquair, in spite of the fact that what was normally the first call on the king's profit, some of the expenses of the mint, had not been fully met out of his profit on the other plate coined, leaving Falconer heavily 'superexpendit'. Why the covenanters allowed this payment to the treasurer is unknown but it may have been part of some secret bargain with Traquair, a devious man who was trying to retain the favour of both king and covenanters. Might he perhaps have agreed not to resist the covenanters' coining of the king's plate on condition that he was paid the king's profit on the coining? In this way he would at least gain some money (if only a very small amount) for the treasury out of the coining which he was powerless to prevent.

Falconer's account gives the total weight of gold and silver coined in June 1639-April 1641. From this it is possible to calculate the approximate value of the coin struck. As laid down in his contract with the covenanters the former standards of weight and fineness were maintained. One stone of silver coined £778. 18s. 8d.,¹ and 345 stone, 5 pounds, 15 ounces, 4 drops were coined. This should have produced (to the nearest £) £269,022 Scots in coin, just over one-tenth of which was coined from plate seized from the king (34 stone, 9 pounds, 2 ounces, 10 drops).

Gold had been coined at twelve times the value per weight of silver until 1611 when the value of gold coin was raised by 10 per cent.² A stone of gold should therefore have struck £10,281. 18s. 4½d. 2 stone, 6 pounds, 5 ounces, 9 drops, 28 grains were coined, producing (again to the nearest £) £24,635 Scots in coin. Thus by taking over the mint and coining all the gold and silver they could find the covenanters produced about £293,657 Scots in coin. After deduction of the mint profits all of this was presumably available to pay, feed, and clothe their armies.

Exact identification of the coins struck for the covenanters in 1639-41 is made practically impossible by the fact that the coins were, as stipulated in the contract of June 1639, exactly the same as those previously struck for the king. The third coinage of Charles I in Scotland (c. 1637-41) is usually divided into an issue by Nicholas Briot, an intermediate issue, and three issues by Falconer. Presumably most of the coins struck for the covenanters belong to the last three or four of these issues, but though Briot left Scotland in 1638 some of his dies may have remained in use after 1639, for Falconer's account mentions 60s. pieces being struck in 1639-41 and the only surviving specimens of this denomination of the third coinage belong to Briot's issue. As to gold, the third coinage contains two issues, by Briot and Falconer, and presumably the coins struck for the covenanters belong mainly or wholly to the latter.³

In the following transcript⁴ of Falconer's 1639-41 account abbreviations are extended (except in names) and capitalization is modernized. The account is given in full except that in the list of officers' fees the clauses italicized in the first item are omitted in the subsequent items, being exactly the same in substance in each case. The account is not the original signed by the auditors but a contemporary copy.

¹ Patrick, *Records*, I. xxxi-xxxii. In 1636 the privy council stated that a pound of silver should coin 584½ coins of 20d., making £779 per stone (ibid. ii. 51) but £778. 18s. 8d. is the correct amount, as is shown by the amount of profit charged on silver bullion at a rate of one-twelfth (see above). In Scots weights 16 pounds make 1 stone, 16 ounces make 1 pound, 16 drops make 1 ounce, and 36 grains make 1 drop.

² Ibid., i. 220; Murray, 'The Scottish Gold and Silver Coinages of Charles I', *BNJ* xxxix (1970), p. 118.

³ Ibid., pp. 123-8; I. H. Stewart, *The Scottish Coinage* (London, 1955), pp. 105-9, 155-7; E. Burns, *The Coinage of Scotland* (Edinburgh, 1887), ii. 441-84.

⁴ SRO, E.101/5. Transcripts of Crown-copyright records in the Scottish Record Office appear by permission of the Controller of H.M. Stationery Office.

The Compt of the Coyneziehous maid be Johne Falconer
master thairof betwix the sext day of Junij^{j^m} vj^c
threttie nyne zeiris inclusive and the thrid day of
Apryll^{j^m} vj^c ffourttie ane zeiris exclusive as followes

Chairge of Gold

Item thair is past his majesties ironis in vnite
peices double and single quarter and halff
quarter crownis of gold off the fynnes of
tuentie twa caretis in the said space
accordinge to the wardens register bookis
the quantitie of twa stane, sex pound, fyve uncis
and nyn dropes tuentie aucht graines

Tenet sic subscribitur

Wi: Rig

The proffeit of everie vnice thairof is
threttein schillings and extends to the sowme
of _____

lib s d
iiij^c lxxxvij: xv: vj

Item the comptter chairges himselfe with
the remeids of the foirsaid gold light in
the said space extending to the sowme of _____

lib s d
xxxvij: xvj: ix

Summa of his majesteis proffeit
of the said gold extends to _____

lib s d
iiij^c xxxvj: xij: iij

Tenet Wi: Rig

Chairge of Silver

Item, past his majesties irones in the foirsaid
space in thrie pound peices, xxx schillinge
peices, xii schilling peices, vj schillinge peices
in xx and fourttie penny peices off silver off the
fynnes of ellevin deniris according to the wardens
register bookis the quantetie of thrie hundreth
fourttie fyve staines fyve pound, fyftein vnices
and four drope weght in the said space

Tenet Wi: Rig

Quhairof thair is past in bullioun the quantetie
of threttie twa staines weght

The proffeit of every staine weght thairof is
xl^{ix}¹ xvij^s ij^d twa third pairt penny quhilk
extends to the sowme of _____

lib s d
j^m v^c lxxxvij: iij: iij

Tenet Wi: Rig

Swa restis by exchange of
silver coft¹ in the coynez-
iehous in the said space
the quantetie of thrie hundreth
threttein staines, fyve pound,
fyftein vnices and four drope
weght

The proffeit thairof at x^{li}^b vj^s viij^d the stane
weght extends to the sowme of _____

lib s d
iij^m ij^c xxxvij: iij: ij

Tenet Wi: Rig

¹ Coft: bought or procured.

Item mair the comptter [chairges] himselff with
the silver light in the said space viz the
remeids extending to the sowme of

lib s d
j^c xvj: x: viij

Summa of the haill chairge
of silver extends to the
sowme of

lib s d
iiij^m ix^c lj: xvij: j

Summa of the chairge of
gold and silver extends
to the sowme of

lib s d
v^m iiij^c lxxxviij: x: iiij

Sic subscribitur

Tenet Wi: Rig
Rot: Drummond
Johnne Binny

Dischairge

Item the comptter is to be dischairgit with
the proffett of his majesties plait gevin to
the Earle of Traquair conforme to his resait
being the weght of threttie four stanes nyn pound,
twa vneces and ten drope weght at ten pound vj^s
viiij^d the stane weght extends to the sowme of

lib s d
iiij^c lviij: iiij: iiij

Item the comptter is to be dischairgit for the
repairing and poynting the haell coyneziehous
and office housses and renewing of the zard
dyckis¹ with thaiking the great forge with theake²
and biging³ of ane new hous for the fylleris⁴
and wther reparatiouns within the coyneziehous
conforme to the particular compt heirwith
productit and is

lib s d
viiij^c liij: v: iiij

Item payeit to George Foulis former⁵ and
compttroller of the bullioun and customer
comptts thairanent his fie conforme to
his gift of office and his twa dischairges
hirwith productit viz fra Martymes 1635
inclusive to the terme of Witsunday 1641
exclusive being fyve zeiris and ane half at
fyve hundreth merks zeirlye extends to

lib s d
j^m viij^c xxxiiij: vj: viij

Item the comptter is to be dischairgit
with elleven essayes of gold in the said
space at sex pund twelff schillings the
peice extends to

lib s
lxxij: xij:

Item the comptter is to be dischairgit
with ane hundreth threttie aucht essayes of
silver in the said space at twelff schillings
the peice extends to

lib s
lxxxij: xvj:

Item the comptter is to be dischairgit
with the wardens coalls in the said space
conforme to thair dischairges extends to

lib
xij:

¹ Zard dyckis: yard dykes, walls round a garden or enclosure.

² Thaiking . . . with theake: thatching or roofing with thatch or other material.

³ Biging: building.

⁴ Fylleris: filers?

⁵ Former: perhaps in the sense of 'drawer up' of accounts. The word occurs in a similar context in other accounts.

Item payeit to Wm Meget smythe for making
the haell towells¹ and instruments viz the
haill pottis, rolles,² irones and all wther
instruments conforme to his subscrivit
compt heirwith producit extends to _____

lib
j^m v^c lvj:

Item the comptter dischairges himself with
the remeids of silver heave in the said
space extends to the sowme of _____

lib s d
xxij: iiij: iiij

Item the comptter has debursit for the
interest of ten thowsand merks borroweit
to be ane stocke to the coyneziehous for
the space of twa zeiris viz from
Witsonday 1639 zeiris to the terme of
Witsonday 1641 zeiris extends to _____

lib s d
j^m lxxvj: xiiij: iiij

Lateris _____

lib s
v^m viij^c lvj: ij:

sic subscribitur

Tenet Johne Binny

Dischairge
Officiaris fies

Item payeit to George Foulis of
Ravillistoun present generall of the
coyneziehous conforme to his warrand gevin
him ffrom the committee of the estaittis
of parliament for his ordiner and
extraordiner vadge³ fra the first of Junij
1639 zeiris inclusive to the first day of
Apryll 1641 zeiris exclusive extending to
tuentie twa monethes ilk moneth xlv^{lib}
xvj^s viij^d extends to _____

lib s d
j^m viij^c vj: viij

Item payeit to James Bannatyne warden
... ilk moneth xvij^{lib} x^s extends to _____

lib
ij^c lxxxvj:

Item payeit to Thomas Glen comptter
warden ... ilk monethe x^{lib} extends to _____

lib
ij^c xx:

Item payeit to Charles Dickiesone
sinker of the irones ... ilk monethe
xvj^{lib} xiiij^s iiij^d extends to _____

lib s d
ij^c lxxvj: xiiij: iiij

Item payeit to Andro Balvaird essayer
deput ... ilk monethe x^{lib} extends to _____

lib
ij^c xx:

Item payeit to Johne Rankin temperar
of the ironis ... ilk monethe ten
pounds extends to _____

lib
ij^c xx:

Summa of the officiaris

fies extends to _____

lib
ij^m iiij^c xx:

Summa of the haell dischairge is _____

lib s
viiij^m ij^c lxxvj: ij

Tenet Johne Binny

¹ Towells: tools.

² Rolles: rollers.

³ Ordiner and extraordiner vadge: extraordinary

wages were paid in addition to ordinary ones when
the mint was actually at work striking coins, Patrick,
Records, i. xxviii, xxx.

Item mair payeit be the comptter to
Charles Dickiesone sincker for making
aucht sutchion and twa punscheons¹
conforme to his resait

lib
xxvij:

Item payeit to David Sey wryght for
making ane essay kist with locks and
bands conforme to his resait

lib s
xvj: iiij

Tenet Johne Binny

Summa totalis of the haill dischaige
beforwryttin extends to the sowme of
aucht thowsand three hundreth xix
punds vj schillings in brevitur

lib s
viiij^m iiij^c xix: vj

Tenet Johne Binny

Quhilk sowme being compared with the
chaige beforwryttin extending to
fyve thowsand three hundreth
fourescoir aucht pounds ten schillings
four pennies the comptter wilbe super-
expendit att the fitting of this compt
in the sowme of twa thowsand nyn hundreth
threttie punds fyftein schillings
aucht pennies in brevitur

lib s d
ij^m ix^c xxx: xv: viij

Tenet Johne Binny

Att Edb 14: of Julij 1641

The auditors haveing revised this compt beforwryttin they find the chaige thair of fullie instructed be
production of the register of the haill gold and silver past his majesties irones the zeiris compted for,
vnder the hand and subscriptioun of George Foulis Generall of his majesties coynezehous appoynttit
be warrand from the committee of estaitts and the dischaige of the same full[y] instructed be produc-
tioun of sufficient warrands and ticket[s] of recept conforme to the particulars befor specifiet as also
they find the comptter (his chaige and dischaige being compared) to be superexpendit in the sowme
of twa thowsand nyn hundreth threttie punds fyftein schillings aucht penneis

sic subscribitur

Wi: Rig

Rot: Drummond

Johne Binny

¹ Sutchion and punscheons: escutcheon and puncheons, dies or punches for making dies.

THE SCOTTISH COPPER COINAGES, 1642–1697

J. K. R. MURRAY AND B. H. I. H. STEWART

ALONE so early in northern Europe, issues of copper coins were made in Scotland (and Ireland) during the second half of the fifteenth century. In Scotland, after these early coinages of copper farthings and pennies, the smaller denominations, up to the end of the sixteenth century, were of silver or billon. The billon was often extremely base, sometimes falling as low as one part of silver to twenty-three parts of copper, as in the case of some of the hardheads of Mary and James VI. The last Scottish billon coins were the saltire placks, issued in 1594. After this, pure copper only was used for coins of very small value, commencing with an issue of 100 stone of twopenny and penny pieces in 1597. Further issues of coins of these values, each of 500 stone, were made in 1614, 1623, and 1629. The penny and twopenny of 1597 have a bust of James on the obverse which is the same as that on the twelve-penny and thirty-penny pieces issued during 1594–1601.¹ The other issues are without a bust and have relatively little variety. The issue of about 4,000 stone of pennies and twopennies of very light weight during 1632–9 has been comprehensively reviewed by Mr. R. B. K. Stevenson.²

The various series covered by the present paper, which comprise the remainder of the Scottish copper coinage, have been dealt with as follows:

(a) 1642–68 by Murray. Although the available coins have been examined in considerable detail, a great many of them were in such poor condition that plans for a comprehensive die study were eventually given up. Preliminary work showed that the number of dies used was very large.

(b) 1677–9. Worked on jointly by Stewart and Murray. Numerous dies were used, but no die study has been attempted.

(c) 1691–7 by Stewart. As far as we know, no die-analysis of any series of Scottish, or English, early milled coinage in silver or copper has hitherto been published, and we have therefore felt justified in setting out the evidence for the two copper denominations struck at Edinburgh in 1691–7 in some detail. A number of interesting features have emerged, although whether they are typical of the activities of the Scots mint we are not yet in a position to say, much less whether at the much larger Tower mint or at the English recoinage mints of 1696–7 a similar pattern in the use of dies is to be observed.

In spite of the separate responsibilities for (a) and (c), the whole is genuinely a joint paper since we have discussed together both series at all stages and incorporated many of each other's ideas.

Coins are of two denominations: the twopenny, turner or bodle in all three periods, and the sixpenny, or bawbee, in the last two. The names bodle and turner for a Scottish twopenny piece were both in common use in the seventeenth century. Bodle is a corrupt form of bothwell. References to bothwell as a coin name are exceptionally rare prior to

¹ This silver issue began in 1593, but mint records show that no 12*d.* or 30*d.* pieces were struck until 1594.

² R. B. K. Stevenson, 'The "Stirling" Turners of Charles I', *BNJ* xxix (1958–9), pp. 128–51.

1700. The only recorded example, which is not given in the *Oxford English Dictionary* or in the *Dictionary of the Older Scottish Tongue*, occurs in a British Museum manuscript of about 1639.¹ After 1700 there are several mentions of bothwell, such as those given by Nicolson,² Anderson,³ Cardonnel,⁴ and Pinkerton.⁵ In view of all these occurrences it is remarkable that there is no entry for bothwell in the *O.E.D.* or in the *Scottish National Dictionary* (which lists words occurring after 1700). The word bodle is not known to occur until 1650, this being the earliest reference given in the *O.E.D.* and *D.O.S.T.* It is not known why a copper twopenny piece should have been called a bothwell. No mint official of this name is known and there does not appear to be any particular reason why a coin should be named after any of the Earls of Bothwell. Nevertheless, it seems not unlikely that the coin was named after one of the earls, perhaps Francis Stewart, who was Earl of Bothwell at the time the first twopenny pieces were issued in 1588-90. A possible analogy is that of the rather base Scottish testoons of 1555 which became known as the 'duke's testoons'.⁶ The most likely duke is the Earl of Arran whom the French created Duke of Châtelherault in 1549, but his connection with the testoons is not obvious.

Turner is thought to be derived from the French *tournois*. It has a slightly older history than bodle for it is frequently found from 1631 onwards. By the second half of the seventeenth century bodle and turner appear to have been used indiscriminately to mean any Scottish coin worth twopence. In this paper, to avoid possible confusion, we have used turner throughout.

A bawbee was originally a sixpenny piece. The name came into use about 1539 when billon coins of this value were first struck and is thought to be derived from that of the then mintmaster, Alexander Orrok of Sillebawby. It remained current as long as the bawbees of James V and Mary continued to circulate. It is not known if it was used for the silver sixpenny pieces struck after the union by James VI and Charles I. Although the Acts of Privy Council and of Parliament in the reigns of Charles II, William and Mary, and William alone, ordering copper coins worth sixpence, refer to them as sixpenny pieces, bawbee soon became the normal name for them. Since the Scottish sixpence was worth one-halfpenny sterling, bawbee continued to be used after 1707 for a halfpenny and can still be heard to the present day.

ACKNOWLEDGEMENTS

Our grateful thanks are due to Mr. R. B. K. Stevenson for many helpful comments made during the preparation of the paper and for the loan of photographs of coins in the National Museum, Edinburgh; to Mr. A. J. Aitken, editor of the *Dictionary of the Older Scottish Tongue*, for some additional material about coin names; and to Messrs. A. H. Baldwin and Sons for lending many coins from their stock for study. Thanks are also due to Mr. Stevenson and to the Keeper, Department of Coins and Medals, British Museum, for the provision of most of the casts used for illustrating the paper.

¹ Add. MS. 28566, fol. 29b. For a transcript see *BNJ* xxxix (1970), p. 130.

² William Nicholson, *Scottish Historical Library* (London, 1702), pp. 314 and 326.

³ James Anderson, *Diplomatum et Numismatum Scotiae Thesaurus* (Edinburgh, 1739), p. 67, footnote (u).

⁴ Adam de Cardonnel, *Numismata Scotiae* (Edinburgh, 1786), p. 37.

⁵ John Pinkerton, *An Essay on Medals* (3rd edn., London, 1808), ii, p. 137.

⁶ R. W. Cochran-Patrick, *Records of the Coinage of Scotland*, i, p. 232. Afterwards cited as C-P.

In this paper references are made to the following coins:

- BM Coin in the British Museum
 B. No. Coin catalogued by Burns in *The Coinage of Scotland*
 R. No. Coin catalogued by Richardson in the *Catalogue of the Scottish Coins in the National Museum of Antiquities, Edinburgh*
 NMA Coin in the National Museum, Edinburgh, not in Burns or Richardson
 RCL Coin formerly in the collection of R. C. Lockett
 S and M Coins in the writers' collections.

In the lists an asterisk indicates a coin illustrated.

THE CR AND CR^{II} TURNERS

During the two periods 1642-50 and 1663-8 large numbers of twopenny pieces, or turners, were struck in Scotland. The relevant Acts specified that there were to be 170 $\frac{2}{3}$ turners from the pound, an enormous improvement on the 'Stirling' turners of 1632-9, of which there had been 576 from the pound.

The issue of 1642-50

In a warrant of 24 February 1642 the Scottish Privy Council ordered 1,500 stone of turners.¹ These were to replace all copper coins previously struck in Scotland, the circulation of which was banned from 20 March 1642. In due course further warrants were granted for 1,500 stone (12 November 1644),² 1,000 stone (1 March 1648),² and 60 stone (4 July 1650),³ a total of 4,060 stone, equal to over 11 million coins.

On 20 May 1646 the Privy Council 'prorogated' (i.e. prolonged) the warrant granted on 12 November 1644 until 11 November 1646.⁴ This could mean either that the 1,500 stone ordered in 1644 had not yet been completed, and so further time was to be allowed, or that the minting of an additional, but unspecified, amount of coin was now authorized. Either interpretation seems equally possible. As the Act of November 1644 had stipulated that the whole 1,500 stone should be completed within six months of the date of the Act, that is, by May 1645, it is perhaps more likely that the object of the prorogation was to authorize the striking of turners additional to the 1,500 stone. If this was the case, then 4,060 stone would not represent the total amount of coin struck.

The issue of 1663-8

On 12 June 1661 the Scottish Parliament ordered 3,000 stone of a new issue of copper twopenny pieces.⁵ The first 2,000 stone was to be struck within three years after 12 June 1661 and the remainder on the expiry of the three years as the Privy Council should order. It was remitted to the Privy Council to decide the precise designs and legends. As the Privy Council decisions in this matter are nowhere stated, there is no means of telling what agreement was reached. Minting did not begin until July 1663, so the time limit was later extended to April 1665 for the first 2,000 stone and to June 1666 for the remainder.⁶ The time was again extended up to June 1668 and then finally up to 1 August 1668, when minting was ordered to cease.⁷

¹ C-P ii, pp. 67-8.

² *Register of the Privy Council of Scotland*, viii (1544-1660), pp. 135-6.

³ C-P ii, p. 133.

⁴ C-P ii, p. 70.

⁶ C-P ii, p. 154.

⁵ C-P ii, p. 138.

⁷ C-P ii, pp. 157-8.

These repeated extensions were doubtless made at the request of the general of the mint, Charles Maitland of Halton. What the Privy Council was apparently unaware of was that the 3,000 stone originally ordered had in fact been completed in 1666. From that time on, until the issue of turners ended in 1668, the mint authorities redoubled their efforts and produced well over 5,000 stone more, entirely as it seems without official sanction. A manuscript book in the Scottish Record Office gives some details of the quantities struck.¹ During the period 31 July 1663 to 17 July 1668 there were at least twenty-one accounting periods of various lengths of time. The following is a summary showing the amount of coin minted in approximately each calendar year:

	<i>st.</i>	<i>lb.</i>	<i>oz.</i>	<i>den.</i>
31 July to 26 Dec. 1663	647	12	9	5
28 Dec. 1663 to 21 Dec. 1664	832	6	8	0
21 Dec. 1664 to 1 Jan. 1666	923	4	0	0
1 Jan. to 14 Nov. 1666	776	13	2	4
14 Nov. 1666 to 1 Dec. 1667	2,703	2	11	0
1 Dec. 1667 to 17 July 1668	2,588	8	0	0
Total	8,471	14	14	9

If we again condense the figures we get (omitting odd amounts):

		<i>Approximate no. of turners</i>
31 July 1663 to 14 Nov. 1666	3,180 stone	8,684,200
14 Nov. 1666 to 17 July 1668	5,291 „	14,449,700
Total	8,471 „	23,133,900

This shows that the 3,000 stone ordered in 1661 had been completed by November 1666.

The attribution of the turners

The general type of the turners is:

Obv. CAR D G SCOT ANG FRA ET HIB R

The letters C R crowned, with a lozenge between the C and R.

Rev. NEMO ME IMPVNE LACESSET

A leaved thistle.

To fit these issues of 1642-68 there are two distinct varieties of turner, both very common: one has just the initials C R crowned as the obverse type and has a lozenge mint-mark on both sides, except in a very few cases where the lozenge is omitted or a pellet has been substituted; the other variety has C R¹¹ and also differs from the first in having a whole series of mint-marks on both obverse and reverse. On neither variety is there a regnal number after the king's name.

In the original warrant of February 1642 the coin type is carefully described and since there is no mention in it of a II after the C R, it might be thought that the variety without the II must be the one specified. Burns reminds us, however, that coins often do not exactly tally with the details given in the warrants. While it has long been recognized

¹ E 102/10.

that one variety must belong to the period 1642-50 and the other to 1663-8, it has remained a matter of conjecture which came first. The older writers on Scottish coins—Cardonnel, Lindsay, and Wingate—attributed both varieties (as also the Stirling turners) to Charles II, thereby ignoring completely the issues of 1642-50. R. W. Cochran-Patrick, whose *Records of the Coinage of Scotland* was published in 1876, seems to have been one of the first to appreciate that the two varieties belong to different reigns, and he attributed those with C R to Charles I and those with C R^{II} to Charles II.¹ Burns felt unable to commit himself definitely one way or the other as regards the attribution of C R and C R^{II} turners, although he favoured assigning those with C R^{II} to Charles I because he considered that the II denoted the value. Since the very light Stirling turners had the value stamped on them, it seemed to Burns only proper that the new turners, which were of the same nominal value, but were three times heavier than the Stirling turners, should also have the value on them. Against this suggestion Burns points out that an Act of Privy Council of 2 October 1661 prohibited the circulation of certain counterfeit turners which have the legends NOMEN DOMINI SIT BENEDICT and DEVS PROTECTOR NOSTER.² These forgeries have C R and not C R^{II}. Since the striking of turners in Charles II's reign did not begin until July 1663, the forgeries must have been copied from the turners struck during 1642-50. From this one might conclude that the turners of 1642-50 were without the numeral.

In the course of his arguments Burns stated: 'unfortunately, we have no clue, from any difference in the style of work on the better executed, and presumably more authentic, of these coins, to assist us in determining to which of the respective periods they should be severally assigned'.³ None the less, a recent re-examination of the two varieties has resulted in the discovery of certain features which lead us to believe that the Cochran-Patrick attributions are the correct ones, namely, that turners with C R belong to the period 1642-50 and those with C^{II} R to 1663-8.

(a) On most C R turners the crown above the C R is the same as that on the reverse of the Briot/Falconer forty-penny pieces, the identical punch having been used. The forty-penny pieces were issued from 1637 to about 1640. If C R turners are to be attributed to Charles II, then it must be assumed that the punch was retained at the mint from about 1640 until 1663. While this is not out of the question, it seems much more probable that it was pressed into service for the copper issues from 1642 onwards. The thistle-head (but not the leaves) of the forty-penny pieces is also the same as that on the C R turners. A further connection is that the letter E on the C R turners is the same as that on Falconer's anonymous issue six-shilling pieces (c. 1641).

(b) C R turners normally have a lozenge mint-mark. A similar mint-mark is commonly found on Stirling turners and on the later issues of twenty-penny pieces (1640-1). This gives the turners a strong family resemblance to coins which, we now believe, were their immediate predecessors.

(c) On the Stirling turners the die-sinker sometimes misspelt the word IMPVNE and the variations INPVNE and IPVNE occur, as well as the shortened forms IMPV and IMPVN. Similar spelling mistakes are found on C R turners and the errors INPVNE, IMPNE, and INPNE have been found. No such mistakes are known on C R^{II} turners.

¹ C-P ii, pl. xiii. 17, and pl. xiv. 1.

² C-P ii, pp. 143-4.

³ E. Burns, *The Coinage of Scotland*, ii, p. 490.

(d) On Falconer's silver issues (1639-42) the colon after the D of D:G was gradually replaced by a single point. C R turners nearly always have the single point, as they might be expected to if they followed immediately after Falconer's silver issues.

(e) C R^{II} turners appear always to have D:G and often have colons between other words in the legends. This gives them a slight link with Charles II's silver issue of 1664-75, on which colons are often found after DEI and the date.

(f) The figures for the amount of bullion struck during successive periods between 1663 and 1668 show that output was much more limited in the early stages than in 1667-8. This may be compared with the surviving C R^{II} turners amongst which the early varieties are rare and the late common.

(g) A hoard found at Glenbeg, Moray, in 1864 consisted of silver coins of Mary Tudor, Elizabeth, James I, and Charles I and 554 copper coins.¹ Of the copper the writer stated: 'the great bulk of these coins being the bodle with C R crowned, there being not a single specimen noticed with C R^{II}'. If C R turners are to be attributed to Charles II, it would need to be argued that the hoard was deposited very shortly after the minting of turners had begun in 1663 and before any silver coins of Charles II, Scottish or English, had become available to the hoarder. Although it would be quite possible for a parcel of several hundred turners to be all of 1642-50 or all of 1663-8, the natural assumption is that the great bulk of the turners were in fact those of Charles I, and that the hoard was deposited before 1663.

(h) Forty C R turners and the same number of C R^{II} turners were weighed, the coins being taken at random from among those available. Some were corroded and all were worn to a certain extent from normal use. It was found that the C R turners averaged 41.3 gr. (compared with the standard weight of 44.2 gr.), the lightest weighing 31.7 gr. and the heaviest 53.1 gr. The relevant Acts had ordered that there should be 10 $\frac{2}{3}$ turners in the ounce and 85 $\frac{1}{2}$ in the mark weight. In spite of the great irregularity of the weights, it does seem to have been the intention of the mint officials that the C R turners should average something close to their correct standard weight when weighed in bulk. On the other hand, the forty C R^{II} turners averaged only 33.8 gr., the legal standard weight being the same as before. The lightest turner weighed 20.5 gr. and the heaviest 46.5 gr. Since the general condition of both lots of coins was similar, it is highly probable that no attempt was made to produce coins averaging 170 $\frac{2}{3}$ from the pound. It has been pointed out elsewhere that during the reign of Charles II Scottish silver coins were usually well below their proper weight because of the dishonest practices of certain mint officials, particularly the general of the mint.² The below-average weight of the C R^{II} turners tends to confirm that they were issued concurrently with the lightweight silver coins and suffered the same fate.

THE TURNERS OF CHARLES I FROM 1642

Obv. CAR · D · G · SCOT · ANG · FRA · ET · HIB · R

C R crowned, a lozenge between the C and the R. Lozenge mint-mark.

Rev. NEMO · ME · IMPVNE · LACESSET

A leaved thistle. Lozenge mint-mark. Normally there is a single point between the words on both sides of the coin.

¹ NC 1864, p. 226.

² BNJ xxxviii (1969), pp. 120-1.

The turners have marked variations in the style of the crown, of the large letters C R, of the thistle-flower and of the thistle leaves. The C sometimes has a plain lower tip and sometimes a thickened ornamental one. When the C is plain the C and R are small (4 mm. high). When the C is ornamental it is always of a slightly larger size than the plain C ($4\frac{1}{2}$ or nearly 5 mm.), while the R may vary from 4 to 5 mm. The plain C is the earlier (type I) since the obverses always have the Briot/Falconer crown and the reverses the Briot/Falconer thistle-flower.

Varieties having a C with an ornamental lower tip are more complex than those with the plain one. They may have either the early thistle (type II) or a new and slightly broader one which has a hollow top showing as an ellipse (type III). The leaves accompanying this new thistle are the same ones as before, but are much worn down. They now have only one or two prominent spikes on the inside edge of each leaf instead of four such spikes along the inside edges of the early leaves; the old punches had evidently become unserviceable and were renovated. On turners with the ornamental lower tip to the C the style of the crown varies. The earliest have the Briot/Falconer crown, while many later ones (type IV) have a crown which is generally of a coarser and blurred appearance, although it is exactly the same size as the Briot/Falconer one. On these later crowns the lis are of a slightly different style, though they can seldom be seen clearly owing to the normally poor state of the coins. The cross at the top of the crown, originally so stumpy as to look almost round, has now become a plain cross with clearly projecting arms. It seems probable that this later crown is the same as the original one, but on account of rust or wear the punch has been touched up where necessary.

In the table below, the turners have been divided into four main types according to the characteristics outlined above. Many of the specimens examined were in poor condition, making it difficult in some cases to identify the type. Of the four types, III is the least common. There is very little difference between the obverses of types II and III. During the issue of type II a fractionally larger R was introduced and this R continued to be used in type III. On a few dies the cross at the top of the crown is partly missing and these seem to be very late type III obverses before the crown was replaced or refurbished. The several features by which type IV can generally be distinguished are set out in the table. One of them to be noted is a crude type of F, with the upper stroke deflected upwards from the horizontal, which may always be present because it has been seen on a type III turner. (See p. 116 and Pl. III.)

Type	Crown	Style of C	C	R	Thistle	Leaves	Remarks
I	Briot/ Falconer	Plain	4 mm.	4 mm.	Briot/ Falconer	Prominent spikes	
II	„	Ornamental	$4\frac{1}{2}$ mm.	4 or $4\frac{1}{2}$ mm.	„	„	On some dies the C has a large lower tip.
III	„	„	„	$4\frac{1}{2}$ mm.	New thistle	Worn spikes	
IV	New crown or old one refur- bished. New cross at the top.	„	Nearly 5 mm.	5 mm.	„	As above. Tip of left thistle leaf is often defective.	Normally the A has a large left serif. Crude F possibly al- ways present.

In addition to the regular issues of turners there are some excellent patterns (Pl. III. 9). The only specimens seen were two in the British Museum which are from different pairs of dies. There does not appear to be any documentary evidence concerning these patterns and their origin is obscure. The lettering is smaller and neater than on normal turners. None of the punches are known to have been previously or subsequently used for making other dies.

Varieties of turners 1642-50. (See p. 116 and Pl. III.)

Type I	Examples
a. With normal legends	NMA (1958 and 1961), S*, M
b. INPVNE	NMA (1961), S, M
c. INPNE	S, M
d. LACESSET	NMA (1957), S, M
e. No obverse mint-mark	S, M
f. No interior to crown	B.7, R.127, S, M
Type II	
a. Normal legends	NMA (1958), S*, M*
b. D:G:	S, M
c. IMPNE	NMA (1954), S
d. Point for lozenge mint-mark on obv.	S
e. Point for lozenge mint-mark both sides	S*, M
Type III	
a. Normal legends	B.8, NMA (1965), S, M*
b. FRAN ET HI R	S*
c. FRAN ET HIB R	M
Type IV	
a. Normal legends	B.9, 10, S*, M*
b. D:G:	S, M
Pattern	BM*

CHARLES II

First issue (1663-8). Turners

Obv. CAR D G SCOT ANG FRA ET HIB R

C R¹¹ crowned, a lozenge between the C and R, a pellet after the R and before, and sometimes after, the II.


Rev. NEMO ME IMPVNE LACESSET

A leaved thistle.

A variety of mint-marks occur on both sides of the turners.

Certain characteristics enable us to distinguish the earlier from the later of these turners.

(a) The letter T. Very early dies have a large T in SCOT, ET, and LACESSET. Afterwards a smaller T was always used except on a few late dies.

(b) The letter S. Early dies have a plain s in SCOT and LACESSET. This was soon changed to a pseudo-gothic  and finally, late in the series, a plain s was reintroduced.

(c) The original obverse crown has a cross at the top of it that is little more than a blob. In course of time this 'cross' broke off the punch and was replaced by a cross put

on the die with a separate punch. Finally, the orb on which the cross stood also broke away, dies with this feature being the very last in the series.

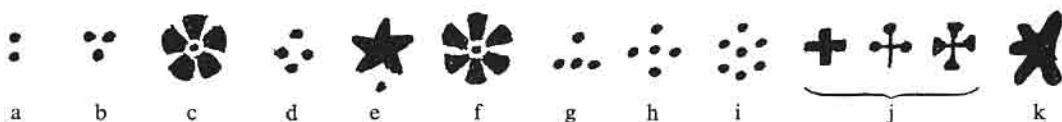
(d) The large letter c. On turners with the 'blob cross' it has been found that the c measures just under 5 mm. high. On turners with the punched cross a new c has been used measuring about $5\frac{1}{2}$ mm.

(e) On very late dies the top of the large letter r has broken off, making it resemble a κ.

(f) The thistle. On the earlier reverses the length of the thistle from the top of the flower to the end of the stalk measures $11\frac{1}{2}$ mm. Later, a new slightly longer thistle stalk was introduced ($12\frac{1}{2}$ mm.). This longer stalk protrudes more noticeably below the leaves.

The main feature of interest of this coinage is the number and variety of mint-marks on both sides of the coins. Since the Stirling turners had a complicated series of mint-marks on them, it could be argued that the c r¹¹ turners followed immediately after them with a similar system. But there does not appear to have been any consistency in these matters at the Scottish mint. In the reign of William and Mary there is a whole series of mint-marks on the bawbees, whereas there are none on any of the large issue of turners in the same reign.¹ Moreover, no mint-marks are to be found on the extremely numerous bawbees and turners of Charles II issued during 1677-9, nor on the bawbees and turners of William dated 1695-7. It would appear that the use of mint-marks was at the discretion of the die-sinker or some other mint official at the time.

The following mint-marks have been seen on c r¹¹ turners, but as the sample examined was minute compared with the actual number of coins struck, it is by no means certain that every variety has come to light.



Two-pellets (a). Probably the earliest mint-mark. The pellets are very small. Only seen on obverses, the reverses having a cinquefoil (c) or, in one case, a lion (k).

Three-pellets (b). Very small pellets. Only seen on one obverse die, the reverses having a cinquefoil. Another tiny pellet can be seen below this mint-mark which might possibly be intended to form part of it, but, more probably, this dot is a flaw.

Cinquefoil (c). Common on reverses, but less common on obverses.

Four-pellets (d). Very small pellets. Seen on obverses only with cinquefoil, star-and-pellet (e), or pellet cross (h) on the reverses.

Star-and-pellet (e). A very small five-pointed star with a pellet below. Seen on reverses only, the obverse mint-mark being four small pellets.

Sexfoil (f). Found on obverses and reverses.

Four-pellets. As (d), but composed of larger pellets. Occurs on obverses and reverses.

Four-pellets (g). Seen on obverses only (two dies). Possibly a mis-struck form of four-pellets or pellet cross.

Pellet cross (h). Very common on obverses and reverses.

¹ Note, however, that one turner die for 1694 has a tiny star after the date which may be a mint-mark. See p. 128 below.

Rosette of seven pellets (*i*). Rather rare on obverses because only one die is known. It is common on reverses. On the earlier dies with this mint-mark the rosette was struck on the die with a single punch. On later dies the seven pellets have been punched on individually, sometimes very close together; this may give the mint-mark the appearance of a sexfoil similar to, but larger than, (*f*). On some reverses with the pellet cross and rosette mint-marks the tips of the thistle leaves are broken off. This defective form of leaf only occurs when the obverse mint-mark is a cross (*j*). This confirms that these mint-marks are the last in the series and were used concurrently.

Cross (*j*). Much the commonest mint-mark. It occurs only on obverses, the reverses having four-pellets (large), a rosette or pellet cross. This added cross is either plain, or it may have thin arms with a point at each extremity, or, rarely, it may be a cross pattée. It is exceptional for another mint-mark to appear above this cross, a few specimens being known with a rosette above it.

Lion (*k*). Two coins in the National Museum of Antiquities, Edinburgh, have identical reverses on which the mint-mark is a lion. One of these coins has a normal early obverse with crown and lettering as on other C R¹¹ turners. The other specimen has an entirely different obverse: the crown, C R and lettering, particularly the letter o in SCOT which is round, are quite different from those on normal turners, while between the C and R, instead of the usual lozenge, there is a lion; the mint-mark, which is indeterminate, consists of several small pellets. The reverses also have the different style of lettering with the round o, and the thistle and leaves are different from those on other turners, there being four instead of five serrations on the outside of each leaf. In spite of the evident genuineness of one obverse, it is possible that both coins are forgeries.

The features described above may be summarized as follows:

Obverse mint-marks. (See p. 116 and Pl. III.)

<i>Mint-mark</i>	<i>Number of specimens examined</i>	<i>Number of dies noted</i>	<i>Large letter C</i>	<i>Letter T</i>	<i>Letter S</i>	<i>Die examples</i>
Two-pellets (<i>a</i>)	4	2	5 mm.	Large	S	1. NMA (1965), S, M* 2. S
Three-pellets (<i>b</i>)	2	1	"	"	Illegible	M*,
Cinquefoil (<i>c</i>)	7	2	"	Small	S	1. B.1, S*, M (has star stops) 2. S, M
Four-pellets (small) (<i>d</i>)	5	1	"	"	"	NMA (1965), R.126*, BM, S, M
"	3	1	"	"	§	R.124, S, M*
Sexfoil (<i>f</i>)	7	3	"	"	"	1. S*, M 2. S 3. S, M
Four-pellets (large) (<i>d</i>)	2	1	"	"	"	BM, S*
Four-pellets (<i>g</i>)	3	2	"	"	"	1. S, M 2. M*
Pellet cross (<i>h</i>)	16	7	"	"	"	NMA (1956), R.125, S*, M
Rosette (<i>i</i>)	9	1	"	"	"	B.2, R.122, 123, NMA (1921 and 1956), S*, M
Cross with rosette above	2	2	5½ mm.	"	"	1. S. 2. M*
Cross (<i>j</i>)	2	2	"	"	"	S
"	34	Common	"	"	S	B.3, 4, and 5, etc., S*, M**
"	2	2	"	Large	"	1. S. 2. M

Reverse mint-marks. (See p. 117 and Pl. III.)

<i>Mint-mark</i>	<i>Number of specimens examined</i>	<i>Number of dies noted</i>	<i>Letter T</i>	<i>Letter S</i>	<i>Length of thistle</i>	<i>Die examples</i>
Cinquefoil (c)	8	4	Large	S	11½ mm.	1. B.1, M* 2. S 3. S, M 4. M
"	6	3	Small	"	"	1. R.124, S, M* 2. M 3. S
"	4	1	"	⌘	"	S*, M (no stops)
Star-and-pellet (e)	2	1	"	"	"	R.126*, M
Sexfoil (f)	3	1	"	"	"	S, M*
Four-pellets (large) (d)	2	1	"	S	"	BM, S*
"	1	1	"	"	12½ mm.	B.4
Pellet cross (h)	18	Common	"	⌘	11½ mm.	BM, B.2, R.122, S**, M (one die has LACESSE)
"	6		"	"	12½ mm.	NMA (1921), S, M
"	1		"	S	11½ mm.	B.5
"	11		"	"	12½ mm.	NMA (1965), S, M
Rosette (i)	2	"	"	⌘	11½ mm.	S, M
"	3		"	"	12½ mm.	R.123, NMA (1956), M*
"	11		"	S	"	B.3, S, M*
Lion (k)	2	1	..	..	..	NMA (1957* and 1965*)

The commonness of turners with the mint-mark cross is a strong indication that they were struck during the period of the mint's greatest activity in 1667-8. With the exception of the pellet cross all other obverse mint-marks are quite scarce. It is possible that the pellet cross was used on obverses in the early stages of the 'illegal' period until it was replaced by the cross, with the rosette intervening briefly with its single die. The comparative rarity of coins with the earlier mint-marks (to which the cinquefoil as a reverse mint-mark is a notable exception) can well be accounted for by the much smaller mint output during 1663-6.

As already indicated, the mint-marks are commonly muled. A high proportion of the coins examined had illegible or uncertain mint-marks, so the number of pairs noted was small and the list below is almost certainly incomplete. Although the number of specimens seen of each variety is given, in most cases these quantities are too small to have much significance. In addition, numerous other specimens in the stock of the London dealers were examined. When both mint-marks were legible, these were nearly all cross/pellet cross or cross/rosette.

Varieties of turners 1663-8

<i>Obverse mint-mark</i>	<i>Reverse mint-mark</i>	<i>Number seen</i>	<i>Examples</i>	<i>Remarks</i>
Two-pellets	Cinquefoil	3	S, M	
"	Lion	1	NMA (1965)	Forgery ?
Three-pellets	Cinquefoil	2	M	Die duplicates
Cinquefoil	"	7	B.1, S, M	
"	Star-and-pellet	1		Noted by R. B. K. Stevenson
Four-pellets (small)	Cinquefoil	3	R.124, S, M	Die duplicates
"	Star-and-pellet	2	R.126, M	" "
"	Pellet cross	3	BM, NMA (1965), S	LACESSE. Die duplicates

<i>Obverse mint-mark</i>	<i>Reverse mint-mark</i>	<i>Number seen</i>	<i>Examples</i>	<i>Remarks</i>
Sexfoil	Cinquefoil	1	S	
"	Sexfoil	3	NMA (1971), S, M	
"	Pellet cross	1	M	
Four-pellets (large)	Four-pellets (large)	2	BM, S	Die duplicates
Four pellets (as <i>g</i>)	Pellet cross	2	S, M	One die has HB for HIB
"	Rosette ?	1	M	
Pellet cross	Pellet cross	10	R.125, S, M	
"	Rosette	2	NMA (1956), M	Die duplicates
Rosette	Pellet cross	7	B.2, R.122, NMA (1956 and 1921), S, M	
"	Rosette	2	R.123, S	" "
Cross (rosette above)	"	1	M	
Cross	Four-pellets (large)	1	B.4	
"	Pellet cross	14	B.5, S, M	
"	Rosette	12	B.3, S, M	

It remains to consider the meaning of the II on the right side of the obverse field. This numeral presumably indicates either the value (i.e. twopence) or the regnal number. The need to indicate the value seems quite superfluous, as the Scottish people had been handling virtually identical coins since 1642. The Stirling turners, on account of their very light weight, did have the value II on them, although it was placed on the coin between the C and R thus: C II R. On the other hand, if the II represents the regnal number, why was it not put in the legend? This could have been done with little difficulty. It must surely have been deliberate that on both C R and C R^{II} turners the legends are identical, the words on the obverse being abbreviated in exactly the same manner and the only significant difference being the II. This gives rise to the possibility, perhaps rather remote, that the II was intended simply as a mark to distinguish two almost identical issues, and that it has no other meaning. It seems best to leave the matter open.

Turners of 1642-69 Illustrated on Plate III

1. C R turner, type I
 2. " type II
 3. " "
 4. " "
 5. " type III
 6. " "
 7. " type IV
 8. " "
 9. " pattern
 10. C R^{II} turner, obv. mint-mark
 11. " "
 12. " "
 13. " "
 14. " "
 15. " "
 16. " "
 17. " "
- Variant of large c
Point for lozenge both sides
With top of cross missing
Left thistle leaf defective
Two pellets, large τ, plain s
Three pellets, large τ
Cinquefoil (star stops)
Four pellets (small), plain s
" s
Sexfoil
Four pellets (large)
Four pellets (as *g*)

18.	CR ^{II} turner, obv. mint-mark	Pellet cross
19.	" "	Rosette
20.	" "	Rosette above plain cross
21.	" "	Cross with pellets at extremities
22.	" "	Cross pattée
23.	" "	Cross, defective orb and large R
24.	" rev. mint-mark	Cinquefoil, large T, plain S
25.	" "	" small T, plain S
26.	" "	" small T, S
27.	" "	Star-and-pellet
28.	" "	Sixfoil
29.	" "	Four pellets (large)
30.	" "	Pellet cross
31.	" "	" (LACESSE)
32.	" "	Rosette
33.	" "	" pellets punched individually
34.	" Two pellets (obv.), lion (rev.)	
35.	" Uncertain (obv.), reverse as 34	

Second issue (1677-9)

On 27 February 1677 the Privy Council, after commenting on the shortage of copper money in Scotland and complaining that the bulk of such money in circulation was of foreign origin, ordered 3,000 stone of a new issue of twopenny and sixpenny pieces.¹ The turners were to be very slightly heavier than those of the last issue, there being 160 in the pound. It was ordered that the coinage should be concluded by May 1680, but a subsequent Act of Privy Council shortened this period slightly to 10 February of that year.² The turners and sixpenny pieces, or bawbees, are known with the dates 1677, 1678, and 1679.

The bawbees have as their obverse type a large bust of the king to the left, with a small F (for Falconer) before, and so resemble the silver of Charles II's second coinage (1675-82). The inscription, beginning before the bust, and divided at the top, reads

- (a) CAR · II · D · G · SCO · ANG · · FR · ET · HIB · REX ·
 (b) CAR · II · D · G · SCO · AN G · FR · ET · HIB · REX ·
 (c) CAR · II · D · G · SCO · A NG · FR · ET · HIB · R ·
 or (d) CAR · II · D · G · SCO · · AN · FR · ET · HIB · R ·

Most bawbees have inscription (d), the other three being apparently experimental forms, each found on a single die only and on coins dated 1677. The reverse type is a crowned thistle surrounded by · NEMO · ME · IMPVNE · LACESSET · 1677 · (or -8 ·, or -9 ·). Bawbees of all three dates are plentiful.

On the turners, the type of the reverse is the same, except that the thistle is uncrowned and the inscription meets with the date above it; the obverse is a crowned sword and sceptre, the circumscription beginning at the sword-handle, CAR · II · D · G · SCO · ANG · FRA · ET (sceptre) HIB · REX. Turners of 1677 are very common, of 1678 scarce, and of 1679 unknown until one was discovered in working on the material for this paper. Perhaps the date remained unchanged on this denomination.

¹ C-P ii, pp. 168-9.

² *Register of the Privy Council of Scotland*, vi (1678-80), pp. 400-1.

In view of the large numbers of surviving coins and of their lack of variety no die-analysis has been attempted. We have, however, noted that, in the case of readily identifiable dies, duplicates can be found without undue difficulty, more particularly amongst the turners. All the 1678 turners we have seen are from one pair of dies.

There are very few actual varieties of type or inscription. On the turners, the sword punch loses the upper knob (pellet) on its quillon during 1677. Early bawbee reverses (those we have seen combined with (a) and (b) obverses) lack the stops before NEMO and after the date and one of 1679 has no stop after ME (Pl. IV. 6). Mis-spellings are rare—CAR H and SOC on 1679 bawbees, NMEQ, LAESSET, LACSSET, and IIBB on 1677 turners, one die in each case (Pl. IV. 7, 8, 2, 3, 4, 5).

The bawbee letter punches show little variation, although the appearance of the letters sometimes differs, through the effect of striking, in their flat or indented feet. In 1678-9 the letter c closes and the r also deteriorates (Pl. IV. 5). A larger 6 is used in 1679 than for the earlier years. Some variety can be seen in the turner letters, such as A and N; x acquires an upright (x1) in 1678-9, but rarely in 1677 (Pl. IV. 6 and 7).

Scottish copper coins of 1677-9, like the silver of the period, are generally well struck and in good condition are handsome coins. Cases of clashed dies, off-centre striking, or turning in the die are few, and mostly among the turners.

In all, 6,000 stone of copper money was officially ordered during the reign of Charles II. It has already been shown that during 1663-8 alone well over 8,000 stone had been struck. When a commission met in 1682 to investigate abuses at the Scottish mint it was found that a total of 29,600 stone of copper money had been struck during the reign.¹ In the words of the commissioners, 'ther was Twentie three thousand and six Hundereth stone of black money coyned more than was allowed be the warrands'. It would appear from this that over 21,000 stone of turners and bawbees were minted during 1677-9 instead of the 3,000 stone ordered. It is not surprising, therefore, that Charles II copper coins are still extremely common today.

BAWBEES AND TURNERS 1677-9

(Pl. IV)

Bawbees

Obv. CAR · II · D · G · SCO · AN(G) · FR · ET · HIB · R(EX) ·
Bust to left, a small F before.

Rev. · NEMO · ME · IMPVNE · LACESSET · 1677 ·
Leaved thistle crowned.

Examples

1. 1677	CAR · II · D · G · SCO · ANG ·	· FR · ET · HIB · REX ·	B.1, S*, M
2. „	CAR · II · D · G · SCO · AN	G · FR · ET · HIB · REX ·	R.64, S, M*
3. „	CAR · II · D · G · SCO · A	NG · FR · ET · HIB · R ·	S*, M
4. „	CAR · II · D · G · SCO ·	· AN · FR · ET · HIB · R ·	B.2, R.65, S*, M
5. 1678	CAR · II · D · G · SCO ·	· AN · FR · ET · HIB · R ·	B.3, R.66, S*, M
6. 1679	CAR · II · D · G · SCO ·	· AN · FR · ET · HIB · R ·	B.4, R.67, S*, M
7. „	CAR · H · D · G · SCO ·	· AN · FR · ET · HIB · R ·	S*
8. „	CAR · II · D · G · SOC ·	· AN · FR · ET · HIB · R ·	S*

¹ C-P ii, p. 192.

Turners

Obv. CAR · II · D · G · SCO · ANG · FRA · ET · HIB · REX

Sword and sceptre in saltire below a crown.

Rev. NEMO · ME · IMPVNE · LACESSET · 1677 ·

Leaved thistle.

Examples

1. 1677 As above
2. „ NMEO
3. „ LAESSET
4. „ LACSSET
5. „ HIB (for HIB)
6. „ REXI
7. 1678 „
8. 1679 „

B.1, R.68, S, M
 NMA (1965), S*, M
 R.69, S*, M
 M*
 S*
 S*
 B.2, S*, M
 S*

THE COPPER COINAGE OF 1691 TO 1697

Under James VII no copper coinage was issued. It was enacted by Parliament on 14 June 1686 that none should be struck without express warrant from the king and then in sixpenny and twopenny pieces at 40 from the pound (£16 per stone) and 132 from the pound (£17. 12s. per stone) respectively.¹

It appears that the absence of a resultant coinage was in part due to the relatively unprofitable basis laid down, for on 19 July 1690 a further Act was passed recognizing this fact and permitting an issue of copper coins at up to 30s., i.e. 60 bawbees or 180 turners, from the pound. The issue was not to exceed 500 stones per annum for six years and was to run from 1 October 1691. One-third was to be struck in bawbees and two-thirds in turners: if these proportions were observed, the maximum annual issue would have amounted to 160,000 bawbees and 960,000 turners. Provision for a further issue of 3,000 stones of copper coins made by Act of Parliament dated 6 October 1696 does not seem to have been availed of.²

Extant coins suggest that the issue which took place conformed, more or less, with the specification of 1690. We have weighed a sample of the material; the weights (which are given in the lists) indicate that the coins were struck at the maximum permitted number to the pound, which would mean 125.64 gr. (8.14 g.) *al pezzo* for the bawbee and 41.88 gr. (2.72 g.) for the turner, although the weight range of material examined implies that, as might be expected, a little less care was taken with individual weights of copper coins than of silver.

The Act of July 1690 laid down the types to be adopted for the coinage of William and Mary, and after her death on 28 December 1694 new types were promulgated for William alone. The reverse type in all cases is a crowned leaved thistle surrounded by NEMO ME IMPUNE LACESSET and the date, thus following the types used by Charles II except that the thistle on the turner also was now crowned. Left-facing busts first of king and queen, later of the king alone, appear on the bawbee, again as under Charles II. The long titles required while Mary was alive caused the inscription on the bawbees of 1691-4 to extend around the coin, the legend starting and finishing above the heads and being there divided by an initial mark. On William's bawbees the bust reaches to the bottom of the coin and divides the inscription, though not at the top also as the bulkier

¹ C-P ii, p. 214.

² C-P ii, pp. 216, 236, 241.

head of Charles had done. The turners of 1695-7 have a sword and sceptre in saltire with a crown above, like those of 1677-9, but the type for 1691-4 was a crowned cypher of the royal initials, WM, these doing service for the names in the inscription.

The sample on which we have drawn for our analysis consists of nearly 300 coins. They come from the Scottish and English national collections, the collection of R. C. Lockett (of which a photographic record was made before it was dispersed), the collections of the authors and a number of miscellaneous sources of which the most important have been the stocks of the London dealers. Such a sample, though not large in relation to a coinage of several million pieces, is probably adequate for most purposes, and not unduly biased by selection. As a result of work done for this paper a number of specimens of dies or types previously unrepresented in the National Museum have been added to its collection. The sources of the coins studied were as follows:

		<i>NMA</i>	<i>BM</i>	<i>RCL*</i>	<i>M</i>	<i>S</i>	<i>etc.</i>	<i>Total</i>
Bawbees	1691-4	10	7	9 (+1)	11	18	21	76
	1695-7	7	2	4	4	11	13	41
Turners	1691-4	13	5	5 (+1)	3	34	11	71
	1695-7	13	5	8	10	33	40	109
		<u>43</u>	<u>19</u>	<u>26 (+2)</u>	<u>28</u>	<u>96</u>	<u>85</u>	<u>297</u>

(* Two coins from the Lockett collection are now in NMA.)

None of the series, as a whole, is particularly rare. Coins of the several dates, however, are by no means equally numerous, as might have been expected—with the exception of the part-year end-dates—if the maximum (or any other equal amount) of coins had been struck in each year and all dies were used only in the year by which they were dated. For example, bawbees of 1693 are distinctly rare, while 1692 and 1695 are the commonest dates for both denominations in their respective periods. It is suggested below that out-dated dies were not always altered or replaced at the end of a year, in which case we can hardly judge whether equal annual output was achieved.

Both bawbees and turners are difficult to obtain in respectable condition; when fine the former are handsome coins, and often well struck, but the turners tend to be rather unevenly struck and the dies became very worn, so that a full, clear impression is most unusual. A few of the turners are off-centre and several are somewhat double-struck. Although double-struck bawbees are fewer, one of 1692 (no. 8) turned in the die between striking and shows a partial impression of both dies on each side, a rare occurrence among machine-made coins. One pair of bawbee dies must have clashed without a blank between them, to judge from traces of the reverse inscription incuse behind the head (no. 6).

The numbers of different dies observed in our sample were as follows:

		<i>Obverse</i>	<i>Reverse</i>	<i>Exclusive pairs</i>
Bawbees	1691-4	13 (6)	13 (8)	5
	1695-7	8 (1)	7 (2)	4
Turners	1691-4	28 (2)	27 (4)	20
	1695-7	22 (6)	20 (6)	8
Totals		<u>71 (15)</u>	<u>67 (20)</u>	<u>37</u>

The figures in brackets indicate the number of dies which are found in more than one combination and the last column shows the number of pairs in each series the dies of which have been found combined only with each other.

Because of the generally worn condition of the coins and the weakness of the impressions from old dies, it is difficult to identify the dies used in all cases, particularly for the turners. Apart from variations in the inscription, there are several useful means of distinguishing the dies. Bawbee obverses may be recognized by the relationship of the letters to the bust; there are several points of reference with the busts of William and Mary but the top lock of the king's hair is the main pointer for bawbees of 1695-7. There is a sufficient number of different crowns and cyphers to reduce the problem of placing individual turner dies of 1691-4; within the types the relationship of the rounded ends of the letters in monogram to the circumscription is not entirely satisfactory for differentiating the dies, but the point of M in relation to HIB is useful, and so are the positions of the first and last letters with reference to the crown. Turner obverses of 1695-7 are quite easy to distinguish, since apart from the different readings there are four points (at each end of the sword and sceptre) close to the inscription of which the relative positions conveniently vary. Reverse of all coins are most readily identified by the relationship between the thistle stalk and the letters, and by the position of the date. Since examples of almost all dies have been illustrated, verbal description has been kept to the minimum.

A notable aspect of the copper coinage of 1691-7 is that the dies were apparently issued and for the most part used in pairs. The figures above show that 37 pairs, accounting for more than half of the dies noted, are exclusive whilst only 15 out of 71 obverse dies are recorded in more than one combination and only 20 out of 67 reverse dies. In the sections on each series below tables are given showing the number of examples of each die-combination noted by us in the sample. Obviously, a larger sample would be likely to reveal further die interchanges, but the very numbers of coins surviving from some of the pairings suggest that their dies were never used except together (e.g. the 1697 bawbees). This pattern is not even as between the series, interchanging being more frequent in the 1691-4 bawbees and 1695-7 turners. Three cases of treble links, all involving reverse dies, have been noted (bawbee die 1692*a* and turner dies 1695*d* and *g*).

In the case of linked dies it is often apparent which is their true pairing from the relative number of surviving examples. Many of the die-linked coins were represented in our sample by a single specimen or by much fewer than the regular pairings. As examples of this we may cite the bawbee L/1692*e* (no. 13) and the turner Ia/1695*b* (no. 2) of which we have seen one and three specimens respectively. These compare with five specimens of J/1692*e* (no. 12) and seven of L/1694*a* (no. 17); and with seven of Ia/1695*a* (no. 1) and twelve of Ib/1695*b* (no. 3). Extensive cross-linking of dies, as is common in the medieval period, is not found, the nearest instance being the interchanges of the bawbee dies B, C, D, and F with reverses 1691*b*, *c*, and 1692*a*.

Obverse die-links between reverse dies bearing different dates occur in three out of the four series involved (all except the 1691-4 turners). The recorded links between dates are, amongst the bawbees, two of 1691-2 and one each of 1692-3, 1692-4, and 1695-6 and, amongst the turners, two of 1695-6 and one of 1696-7. Although links between dates have been noticed in the silver coinage also (e.g. forty-shilling pieces of 1699-1700), our knowledge of die-combinations in the English and Scottish milled series is not yet

sufficient to enable us to judge whether their incidence in the copper coinage of 1691-7 is of normal proportions. They do, however, raise the question of the accuracy of the dates on the coins. There are clear cases at this period of the relative frequency of dated coins being disproportionate to the amounts recorded as having been struck—for example, the four-merk piece of 1675 and the twenty-shilling piece of 1694 should be commoner than, respectively, those of 1674 and 1693, but the opposite is the case—and obsolete reverse dies seem not infrequently to have continued in use without alteration of the date. The existence of altered dates (the only one in the copper coinage of 1691-7 is a bawbee die of 1693/2) does not preclude the possibility that other dates in the same series were not revised. Two examples will serve to illustrate circumstances where such an occurrence may be suspected. Both involve die-links between dates where the earlier year for the obverse die is much rarer than the later. The first is the case just mentioned of the bawbee no. 13. In the second, bawbee no. 4 of the later series, a 1695 reverse die, which normally belongs to the commonest pairing of that year (no. 3), is found in combination with an obverse die, reading BRIT. FRA., which itself occurs in the commonest bawbee pairing of 1696 (no. 5). There is good reason in each of these cases for doubting whether the obverse die was really used in the earlier year. The star die (L) does not seem likely to have been available in 1692 (without a pair) and after brief activity then to have been laid aside until 1694; nor does the BRIT. FRA. die fit easily into the pattern of 1695 bawbees the rest of which are from three dies reading BR.FR., while the longer form is invariable on all bawbees of 1696-7. It is altogether preferable to suppose that these two reverse dies outlived their date, and a similar explanation may be suspected in other cases, such as that of the type IV turners dated 1695 (no. 8). The link across two years is less incompatible with this theory than it might seem, for the reason why bawbees dated 1693 are so rare may well be that ones dated 1692 continued to be struck during most of the later year.

From the survival figures it is clear that the output of individual dies or pairs of dies varied considerably. On average we have seen about four coins per die but this average conceals a situation where a number of dies in each series (particularly amongst the turners of 1691-4) are represented by single specimens whilst others are known from ten or more. Methods of statistical estimation, based on the observed number of dies in a given random sample, have sometimes been used to indicate the likely range within which the total original number of dies would have fallen; these calculations, however, rely on an assumption, clearly not valid in the present case, of more or less equal output per die. All we can say is this: it seems that we have record of any die which was used at all extensively but that dies which were relatively unproductive are quite likely to have escaped inclusion within our sample, particularly in the case of the turners.

If we were to assume that we know of 90 per cent of the dies originally used, we should postulate approximate totals of twenty-three pairs of bawbee dies and fifty-five pairs of turner dies. Assuming also that the complete issue as authorized actually took place (which need not have been the case, although the provision for a further 3,000 stones in October 1696 may seem to imply that the original sum was then nearing completion) and that the stipulated ratio between the denominations was observed, there would have been struck 960,000 bawbees and 5,760,000 turners over the six years. The average output per die would thus have been in the region of 40,000 bawbees or 100,000 turners. Even though this means that certain highly productive pairs would need, in order to

compensate for the under-used ones, to have struck perhaps twice these figures, or even more, such die-output is not impossible. Many of the turner dies, in particular, ended up in a very worn and dilapidated state, to judge from the weak strikings and from the frequency of die-flaws reproduced on the coins. Cracks or flaws sometimes reached such proportions as to amount to partial disintegration of the surface of the die. Some dies were probably discarded after a short life because of such cracks—one pair of 1696 bawbee dies (no. 6), of which we have seen only a single example, is perhaps a case in point.

The dies do on the whole appear to have been well made and, barring accidents, capable of large output. They are also well designed and without significant errors or mis-spellings; slight double-punching of letters in the die, however, can sometimes be observed (a useful feature for die-identification). Some of the punches used are to be observed on other coins of the period, notably the second bust on the William II bawbees which is the same as that on his silver ten-shilling pieces. Quite a number of punches appear to have been made specially for this copper issue, in particular the seven main obverse punches for the crowned cypher and the crowned sword and sceptre on the two series of turners. That the punches were inclined to break can be seen from the leaf-tip on a late bawbee reverse of 1694 (die *c*) and from the monogram on type II turners of that year. Sometimes punches were deliberately altered, such as the portraits of William and Mary for the bawbees and, perhaps, the crown on the reverse of early 1695 turners from which the inner arches have disappeared.

BAWBEES 1691-4

Thirteen obverse and thirteen reverse dies are known for the bawbees of 1691-4. Many of them are well represented in the material examined although the reverse with altered date (1693/2) and one pair of 1694 (no. 18) are recorded each by single specimens. There are several exclusive pairings (nos. 1, 8, 10, 18, and 19) and in other cases the proportion of surviving specimens of one combination can suggest which is the regular pair (e.g. nos. 12 and 17) and which the interchange (e.g. no. 13). Four early obverses and three reverses are involved in a phase of relatively extensive interchanging, one 1692 reverse being found with three different obverses. In all there are five reverse dies and six obverse dies each used in more than one combination.

Coins and dies of 1692 are the most plentiful and those of 1693 the rarest. Reasons have been given above for believing that dies dated 1692 may have continued to be used for some of the issues of the following year, of which date only one new and the one altered die are known. The number of coins and reverse dies in our sample for each year was:

1691	15 coins	3 dies
1692	37 „	5 „
1693	8 „	2 „
1694	16 „	3 „
Total	<u>76 coins</u>	<u>13 dies</u>

There is no significant variation in the readings which are:

(Mint-mark) GVL.ET.MAR.D.G.MAG.BR.FR.ET.HIB.REX.ET.REGINA(.)
NEMO.ME.IMPVNE.LACESSET.1691 (2, 3 or 4) (.)

A stop after the date is normal, although it is lacking on the 1691 small letter die and on one (*a*) of 1692. The obverse inscription runs from above the head and is divided from its end by a mint-mark, for which a number of ornaments were used. All obverses with pellet cross mint-mark have a stop after REGINA; except that pellets or points accompany the lis mark, none of the later dies have a stop in this position.

Die-combinations of Bawbees of 1691-4

Reverse dies	Bust	Obverse dies												Total no. of coins	
	Mark	1st state				2nd state		3rd state							
		Die	Pellet cross				Thistle	Trefoils	Star	Lis	Star		Lis		
			A	B	C	D					E	F			G	H	J	K	L	M	N
1691a		4													4
b			7	1											8
c			2		1										3
1692a				2	2		8								12
b						3									3
c								10							10
d									6						6
e										5		1			6
1693a									2		5				7
b											1				1
1694a												7			7
b													1		1
c														8	8
Total			4	9	3	3	8	10	8	5	6	8	1	8	76

Lettering varies a little. A 1691 pair of dies, presumably the earliest, has small lettering on both sides. There is some slight variation in the punches used for the letters on the other dies—on reverses of 1692 some fine letters, a little larger than normal, are found—and in the numerals of the date.

The crown and thistle on the reverse are from the same punches throughout, although the foot of the stalk is more elaborate on 1691 dies and on some of 1692; the later reverses have a stub-ended stalk. One die of 1694 shows the tip of the left leaf broken.

Three states of the punch used for the portraits are to be observed. All four obverses (A-D) found with 1691 reverses have the conjoined busts with a rounded front (1st state), but the portrait punch then seems to have been cut away in order to allow more space on the die for the circumscription. The first stage in the alteration of the punch left the front of the bust of Mary with a pointed corner and the truncation of William's showing beneath the shoulder clasp (2nd state); this form is found on the earliest two dies of 1692. The final (3rd) state of the punch, on which the corner has been rounded and the truncation removed, is found all on later dies. The relationship of the lower corners of the busts to the inscription is a useful means of identifying dies, as can be observed from the illustrations.

The mint-marks are as follows:

Pellet Cross (dies A-E). This description covers the earliest marks of the series found on all four dies from the first state of the portrait punch, two of which are recorded only with reverses dated 1691 (A, B) and two with reverses dated both 1691 and 1692 (C, D), and on one (E) of the two dies from the second state. The mark is formed by a central element with four pellets disposed about it cruciform. The general impression is of a blob in the centre, but very well struck and preserved specimens show on one die (A) a near-lozenge, on the second (B) perhaps a tiny lis; on another (E) what is apparently a small star and on the other two (D and C) a tiny quatrefoil.

Thistle. One obverse die (F) used in 1692 has a more or less circular mark hitherto described as a rose but which, on close scrutiny, appears to represent a tiny leaved thistle. It has a flat top, with a small gap each side, and the cog-wheel appearance of the outline from 045° to 315° seems to represent a four-pointed leaf each side of a central stalk (unlike the other eight points, the prong at 180° is square-ended). Within the leaves is the body of the thistle. That this obverse is the earliest after those with the pellet cross mark is suggested both by its showing the second state of the portrait punch and by reverse die-links with two obverses dated 1691.

Two trefoils. Another mark found only on a single die (G) consists of an upright trefoil above an inverted one. This is perhaps the earliest die from the third state of the portrait punch since the mark occurs only on coins dated 1692.

Star. Three obverses have a small six-pointed star. On one of these (L), used with reverses of 1692 and 1694, the star is tiny. One of the other dies (H) is known for 1692 and 1693, the other (K) for 1693 only.

Lis. Three obverse dies have a tiny fleur-de-lis. Two of them (J and M) have a pair of pellets above and to the side of the lis, and the other (N) has a pellet below the lis. Die J has a 1692 reverse, the others are of 1694.

BAWBEES 1695-7

Eight reverse and seven obverse dies have been noted for the bawbees of William II; there are four exclusive pairings, but of two of these we have only seen a single example. The obverse die of one of them (no. 6) has a bad flaw at the top which may have caused its rejection; the other (no. 8) has a ridge behind the bust which may also indicate a defective die. Two obverses of 1695 share a single reverse, and there is a mule between the other 1695 reverse and a 1696 obverse. The latter, the extremely rare BRIT.FRA. variety of 1695, was presumably struck in the later year; the real pairings of its obverse, with a 1696 reverse, and of its reverse, with a BR.FR. die, can be recognized from the much greater number of surviving specimens of each of those combinations. The number of coins and reverse dies of each date noted are:

1695	17 coins	2 dies
1696	13 "	4 "
1697	11 "	1 die
Total	<u>41 coins</u>	<u>7 dies</u>

Obverse dies of 1695 differ from those of 1696-7 in bust and inscription. They read BR.FR. and have a portrait with an angular throat, a straight nose, and a three-sided recess between the drapery and truncation. The later dies, reading BRIT.FRA., have a less angled throat, an aquiline nose, and a small fourth side, at the top back, to the recess. There is some variety in the top curls of the hair of the later bust, one die (V) with a full front curl being perhaps earlier than others (W, T, and X) on which it is rather broken away.

Die-combinations of Bawbees of 1695-7

Reverse dies	Obverse dies								Total no. of coins
	1st bust			2nd bust					
	Q	R	S	T	U	V	W	X	
1695a	3	4							7
b			8	2					10
1696a				7					7
b					1				1
c						4			4
d							1		1
1697a								11	11
Total	3	4	8	9	1	4	1	11	41

On the reverse the type is basically the same as that of the 1691-4 bawbees, but crown and thistle are smaller and the leaves of rounder shape. 1695 reverses and one (or perhaps two) of 1696 have no stop after the date. The two 1696 reverses with the stop have large numerals in the date and annulets as stops; one (a) has the large and handsome letters of the twenty-shilling pieces, of necessity placed very close together.

TURNERS 1691-4

The turners of William and Mary are quite plentiful, particularly those of 1692. The numbers of each date in the sample examined and the number of reverse dies noted bearing each date were as follows:

1691	15 coins	4 dies
1692	28 „	9 „
1693	16 „	8 „
1694	12 „	6 „
Total	<u>71 coins</u>	<u>27 dies</u>

The apparent implication from these figures is that more coins per die were struck of the two earlier dates than of the later. Obverse dies noted number 29 and although there are a few die-links—two obverse and four reverse—the evidence again points strongly to the use of dies basically in pairs. One pair is noted from as many as nine coins, and several from three, four, or five each. Twelve obverse dies and eleven reverse dies are

each recorded from one coin only and the number of pairs represented by only one (10) or two specimens (5) also indicates that a larger sample would be likely to throw up a number of new dies.

There is more typological variety in the turners of 1691-4 than in any of the other series of the 1690s. The whole of the obverse type consists of a crowned monogram of the royal initials of which there are five distinct forms. Each is from a different punch and since each crown is found in combination with a single monogram it appears that both were put into the die from one large punch. There is one exception to this, the fifth monogram being on one die surmounted by a sixth crown. At first sight this appeared to indicate the use of separate punches for the two elements, but close examination of coins struck from the obverse with the sixth crown reveals that there are traces of the fifth crown beneath it on the die: this part of the punch had therefore presumably become damaged or weak and had to be supplemented by a different crown punch. Type V, having been much the most plentiful in 1692 and 1693, is not found in 1694, for some of the coins of which an earlier type (II) was revived. The punch of type II was itself by this date in a damaged state, though not seriously so, and a break at the lower left loop of the w can be seen. It is surprising to find so many punches in use for such a relatively small number of dies, but it may be that their large size and elaborate design caused them to break easily. In two cases, types I and III, only a single die of the type has been noted. Of type I, represented so far by one poorly preserved coin, little can be said, but type III was perhaps a pattern or trial die since the reverse die combined with it was also used with an obverse of type II and the type III die has no obvious pair. There is no straightforward sequence in the types of which more than one die is known (II, IV, and V); types IV and V seem to have been used indiscriminately in 1692-3, although the revival of type II in 1694, as suggested above, may have been due to the need to replace type V. Illustrations of the different types, as figured on the plates, are more indicative than descriptions; in the case of worn specimens the most characteristic features for identification are the curled top ends of the w, the crosses and lis in the crown and the ornaments on the band. The occurrence of obverse types under each year and the number of dies noted are set out in the following table.

<i>Type</i>	<i>Monogram Crown</i>		<i>1691</i>	<i>1692</i>	<i>1693</i>	<i>1694</i>	<i>Total</i>
I	1	1	1 die	..	..	..	1
II	2	2	2 dies	3 dies	..	2 dies	7
III	3	3	..	1 die	..	..	1
IV	4	4	..	3 dies	1 die	4 dies	8
V	5	5	..	4 dies	7 dies	..	11
VI	5	6	..	..	1 die	..	1

On the reverses the crowned thistle is always from the same punch, although there is some variety in the stalk, which is either narrow and stubby or finished with a flat or hollowed foot.

The lettering does not vary perceptibly; one die (*b*) of 1691, however, has larger numerals in the date. Dies of 1693 and some of 1694 have a stop after the date but those of 1691-2 do not. One 1694 die (*f*) with a tiny star in this position has no other stops, whilst another die of this date (*a*) appears to have annulet stops. Two obverse dies (*IVa*

and Vg) have a colon after D and some others lack a stop in this position and/or after G. One type II die (*c*) and almost all the obverses used in 1693 have a stop after REGINA. Two dies of 1694 read REGIN.

TURNERS 1695-7

Based on variation in the design and inscription five obverse types can be defined, and there are two distinct reverse types. Earlier obverses (types I-III) have a large crown surmounting a sword and sceptre disposed in a flat saltire (first design); later obverses (types IV and V) have a smaller crown, permitting the sword and sceptre to be in a more upright position (second design), but breaking the legend at the top so as to require a more abbreviated form of inscription. Three different forms of less abbreviated inscription had been tried with the earlier design. The obverse types may be summarized in the following way:

Type	Design	Inscription	No. of dies recorded	Dates
I	1st	GVLIELMVS.D.G.MAG.BR.FR.ET.HIB.REX	3	1695
II	1st	BRIT.FRA.ET.HIB.R.	1	1695
III	1st	GVL.D.G.MAG.BRIT.FRA.ET.HIB.REX	2	1695-6
IV	2nd	GVL.D.G.MAG.BR.FR.&.HIB.REX	1	1695-6
V	2nd	As IV, but ET	14	1695-7

The early reverse type is found only with types I and II, the normal type being used with all obverses of types III to V and with one of type I. One of the type III dies has a small rosette above the crown. As argued below, the type IV die is probably not among the earliest with the small-crown design, and may be no more than an unintentional or experimental variety of type V.

The principal variety as regards the reverses lies in the form of the crown and thistle. Three reverse dies of 1695 are from the same punches as those of 1691-4, except that the inner arches of the crown and the tip of the right leaf have now broken away. All the other reverses of 1695-7 have a new and smaller crown and thistle. There is some variation in the foot of the stalk. Stops on the reverse are normally found on 1695 reverses, but not on those of 1696-7; the exceptions we have noted to this are a very early die, with the Marian crown and thistle, without stops (1695*a*) and one reverse of 1696(*g*) with stops. One die (*h*) of 1695, with the new type, has a stop after the date, a feature we have not otherwise observed. There is little variation in the lettering, although a larger *c* occurs on some 1695 dies. One die of 1696(*d*) and another of 1697(*c*) have a slightly larger date, and another of 1696(*c*) appears to have the 9 over-punched.

Of the three dates, 1695 is much the commonest, accounting for two-thirds of the coins examined and for half of the reverse dies noted. The figures for each year are:

1695	Marian type	3 dies	30 coins
	New type	7 "	43 "
1696		7 "	19 "
1697		3 "	17 "
	Total	20 dies	109 coins

These totals would suggest that the earlier dies, particularly those with the Marian type, were the most productive, and that dies dated 1696 on average produced

substantially fewer coins than those of 1695 and 1697. Survival rates from individual dies and pairings vary enormously. Single examples only were found of two pairs (Vf/1695k and Vj/1696d), of two other obverses (Vc and Vg) and of one other reverse (1696c). On the other hand, three 1695 reverses (*b*, *d*, and *g*) account for no less than forty-two coins, the maximum in one combination being twelve.

From the twenty-two obverse and twenty reverse dies noted, only eight pairings are unlinked. Two 1695 reverse dies (*d*, *g*) are each recorded with three obverses, and one reverse of 1695(*b*), one of 1696(*a*), and two of 1697(*a*, *b*) have been found in two combinations each. Six obverse dies are each found with two reverses, those of types III and IV providing date links of 1695-6 and one (*g*) of type V a link between 1696 and 1697. Of the four series, the 1695-7 turners exhibit the greatest divergence from the pattern of exclusive pairing of dies. Yet even here it is often (though by no means always) possible to identify the prime pairings of linked dies with some confidence. For example, purely on numerical grounds Ia/*a* and Ib/*b* of 1695 are presumably original pairings and Ia/*b* the interchange. Equally, IIIa/1695e is probably a pair (with six examples to two of IIIa/1696a), type III being originally a 1695 type. The type IV die may belong to 1696 rather than 1695, since the 1695 reverse die found with it is in a worn and cracked state and had already been used in two other 1695 pairings; the type IV turners dated 1695, like the BRIT.FRA. bawbees, seem therefore to be mules struck in 1696.

BAWBEES 1691-4
(Pls. IV-V)

No.	Obverse	Reverse	Die-Links	Examples
	<i>Die</i> <i>Remarks</i>	<i>Die</i> <i>Remarks</i>		
1.	A 1st state. Pellet cross. Small letters. Stop after REGINA	1691a Small letters. No stop after date. Line by stop before date	None	M*; S (8.359 g.); BM; etc. (1)
2.	B 1st state. Pellet cross (lis in centre?). Stop after REGINA	1691b	O = 3; R = 4	M*; S (7.901 g.); NMA (ex RCL); etc. (4)
3.	B	1691c Crack before ME	O = 2; R = 5	BM*; S (8.063 g.)
4.	C 1st state. Pellet cross (? tiny quatrefoil in centre)	1691b	O = 6; R = 2	RCL
5.	D 1st state. Pellet cross (? tiny quatrefoil in centre)	1691c	O = 7; R = 3	S ex Brushfield 121 (7.841 g., worn)
6.	C Signs of clashed dies visible behind head	1692a No stop after date	O = 4; R = 7, 9	M*; S (7.082 g., worn)
7.	D	1692a	O = 5, R = 6, 9	BM*; NMA (Burns 3)
8.	E 2nd state. Pellet cross. Small cracks behind head. Stop after REGINA. T of ET double-punched	1692b	None	S* (8.740 g.); S (turned in die, 7.688 g.); RCL
9.	F 2nd state. Thistle	1692a	R = 6, 7	S* (7.809 g.); NMA (B.2); BM; RCL; M; etc. (3)

<i>No.</i>	<i>Obverse</i>		<i>Reverse</i>		<i>Die-Links</i>	<i>Examples</i>
	<i>Die</i>	<i>Remarks</i>	<i>Die</i>	<i>Remarks</i>		
10.	G	3rd state. Two trefoils. Blob at foot of B in HIB	1692c	Short stalk	None	S* (8.315 g.); 2 NMA (B.1 and Richardson 20); 2 RCL; 2 M; etc. (3)
11.	H	3rd state. Star (6 points)	1692d	9 of date over 2 (?). Short stalk with foot	O = 14	M*; BM (S. fig. 255); S (8.145 g.); etc. (3)
12.	J	3rd state. Lis (with 2 points)	1692e	Short stalk with slanted foot	R = 13	S* (8.248 g.); NMA (R.21); BM; M; etc. (1)
13.	L	See no. 17	1692e	Short stalk	O = 17, R = 12	S (7.846 g., worn)
14.	H		1693a		O = 11, R = 15	S* (8.447 g.); NMA ex Brushfield 125 (7.687 g.)
15.	K	3rd state. Star (6 points)	1693a		O = 16, R = 14	M*; NMA (7.149 g., worn); BM; RCL; S (8.322 g.)
16.	K		1693b	Altered date, 3/2. Short stalk	O = 15	S* (8.224 g.)
17.	L	3rd state. Star (6 points)	1694a	Short stalk	O = 13	M*; NMA (R.22); RCL; S (7.916 g.); etc. (3)
18.	M	3rd state. Lis (with 2 points)	1694b	Short stalk	None	S* (7.820 g.)
19.	N	3rd state. Lis over point	1694c	Short stalk. Tip of left leaf broken	None	S* (7.618 g.); NMA (B.4); 2 RCL; M (double-struck); etc. (3)

BAWBEEES 1695-7

(Pl. V)

1.	Q	1st bust. BR.FR	1695a	Flaw after o	R = 2	M*; NMA (R.28); S (7.479 g., worn)
2.	R	1st bust	1695a		R = 1	S* (8.230 g.); NMA 1972 (8.239 g.); etc. (2)
3.	S	1st bust. Cracks below HIB and truncation	1695b		None	S* (8.628 g.); NMA (B.1); BM; RCL; M; etc. (3)
4.	T	2nd bust. BRIT.FRA	1695b		O = 5, R = 3	S (7.604 g., worn); RCL
5.	T	2nd bust	1696a	Large letters. Annulet stops. Stop after date	O = 4	BM* (S fig. 256); NMA (B.2); S (7.957 g.); M; etc. (3)
6.	U	2nd bust. Bad flaw through BRIT.	1696b	Stop after large date. Annulet (?) stops	None	S* (7.827 g.)
7.	V	2nd bust. Crack below truncation. Full front curl	1696c	Small date. No stop after	None	S* (8.369 g.); NMA (R.29); RCL; etc. (1)

<i>No. Obverse</i>		<i>Reverse</i>		<i>Die-Links</i>	<i>Examples</i>
<i>Die</i>	<i>Remarks</i>	<i>Die</i>	<i>Remarks</i>		
8. W	2nd bust. Ridge (on die?) behind bust	1696d	Small date? Stop?	None	S* (7.817 g.)
9. X	2nd bust. G of GVL double punched	1697a	Crack before, stop after date	None	S*, bad flaw (7.408 g.); S, no flaw; S, slight flaw; 2 NMA (B.2 and another); RCL; M; etc. (4)

TURNERS 1691-4

(Pl. VI)

1. Ia		1691a		None	S* (2.630 g., badly corroded)
2. IIa	Low stop after D	1691b	Stalk touches NE. Flaw at ET. Large date	None	S*, without flaw (2.494 g.); S, with flaw; BM; M; etc. (5)
3. IIb		1691c	Small date. Flaw between crown and l. leaf	O = 4	S*, S (off-centre rev.); NMA (R.23); RCL
4. IIb		1691d	Small date	O = 3	NMA (B.1)*
5. IIc	Stop after REGINA	1692a		R = 8	NMA (B.2)*; S (2.451 g.); RCL
6. IId	Stop after D low. MAG/BR misaligned	1692b	Extensive flaws	None	S, without flaws; S*, with flaws; BM; etc. (2)
7. IIe	A touches crown. Flaw at top l. of cypher	1692c		None	S, slight flaws; S*, bad flaws (2.612 g.)
8. IIIa	Stop after D high	1692a		R = 5	S* (2.522 g.); NMA 1972 (2.358 g.); M
9. IVa	Colon after D. Flaw below 2nd ET	1692d		R = 12	S* (2.386 g.); NMA 1972 (2.754 g.); etc. (2)
10. IVb	Stop after D low	1692e	Flaws in inscription	None	S*
11. IVc	Stop after D low	1692f	Left foot to stalk	None	NMA (R.24)*; S (2.537 g.)
12. Va	Stop after D low	1692d		O = 13, R = 9	S
13. Va		1692g		O = 12	S* (3.014 g.)
14. Vb		1692h		None	S*
15. Vc	Stop after D high	1692j	Mark by left end lis	R = 16	S* (2.864 g.); NMA 1972 (2.725 g.); BM; etc. (1)
16. Vd	Stop after D high	1692j		R = 15	S*
17. IVd	A double-punched. No stop after D. x distorted	1693a	Stop after date	None	S* (2.70 g.)
18. Ve	Stop after D low. No stop after G. Stop after REGINA above crown. M and right side of crown double-punched	1693b	Stop after date. Footed thistle	None	S*; NMA (ex RCL); RCL another

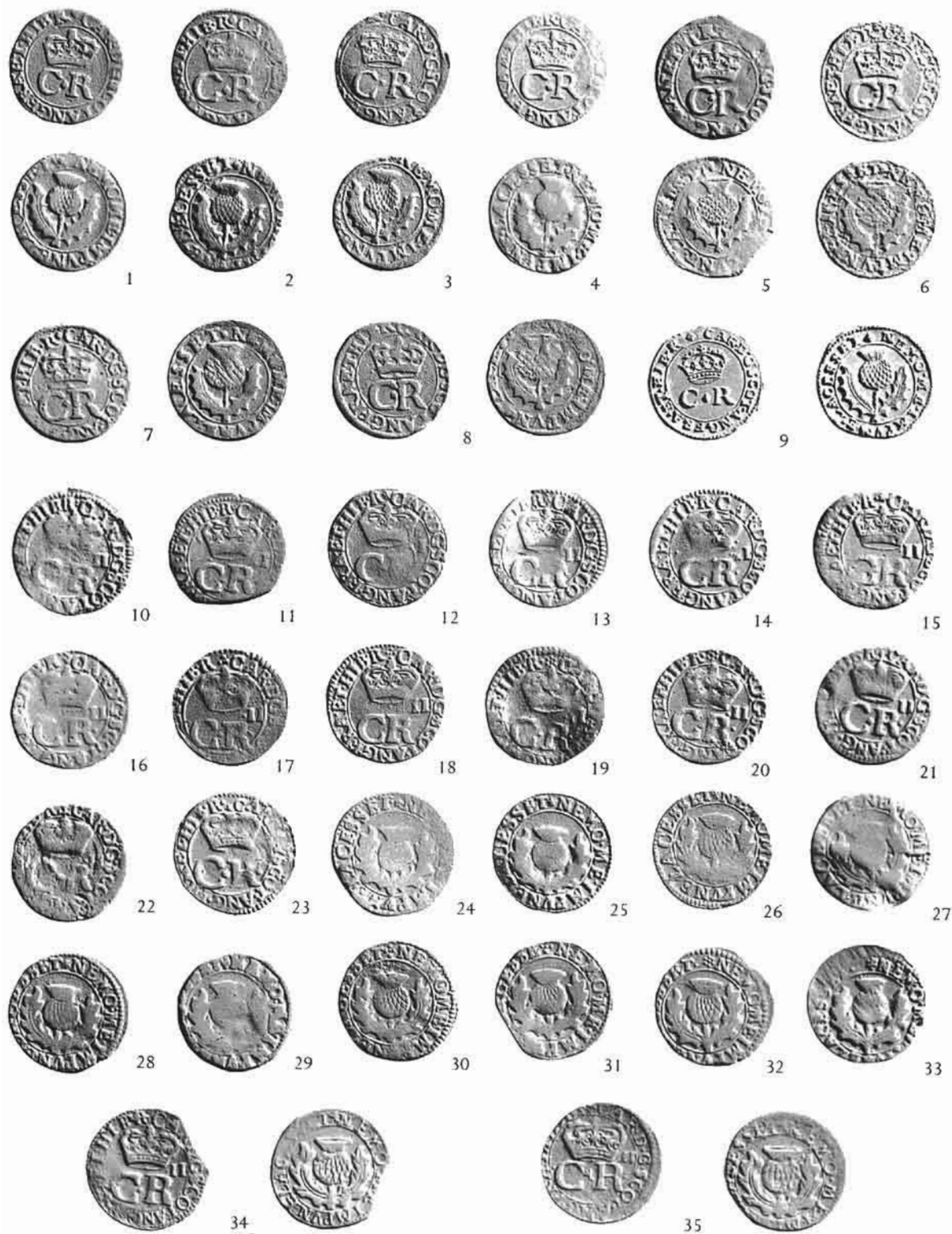
No.	Obverse	Reverse	Die-Links	Examples
	Die Remarks	Die Remarks		
19.	Vf Stop after REGINA	1693c Stop after date	None	S*; BM; M; etc. (1)
20.	Vg Colon after D. Stop not visible after INA	1693d Stop after date	None	S* (ex Brushfield 121)
21.	Vh 1st G double-punched. No stop after D. Stop after INA	1693e Stop after date. Low v	None	S* (2.711 g.)
22.	Vj Stops after D and G high. A touches crown (no stop ?)	1693f Stop after date	R = 23	S* (2.672 g.)
23.	Vk No stop after INA	1693f	R = 22	S
24.	VI Crack from D to ET. ? stop after INA	1693g Stop after date	None	S* (2.517 g.)
25.	VIa Crown overpunched. Point below rt. foot of cypher. Stop after INA	1693h Stop after date	None	S* (2.705 g.); S; NMA (B.3)
26.	II f Left loop of w broken	1694a No stop after date. Annulets (?) before and after ME	None	S* (2.753 g.); NMA 1972 (2.676 g.)
27.	II g w broken. No stop (?) after D	1694b Stop after date	None	S*; NMA 1964; RCL; S
28.	IV e	1694c Stop after date	None	BM (<i>Scottish Cnge.</i> , pl. xx, 257)
29.	IV f No stops (?) after D and G	1694d No stop after date	None	2 NMA (B.4* and R.26)
30.	IV g REGIN (N double-punched)	1694e Stop after date	None	RCL* (ill. from photograph)
31.	IV h REGIN. T of ET low	1694f No stops except star after date	None	S*; S (2.525 g.; shows star)

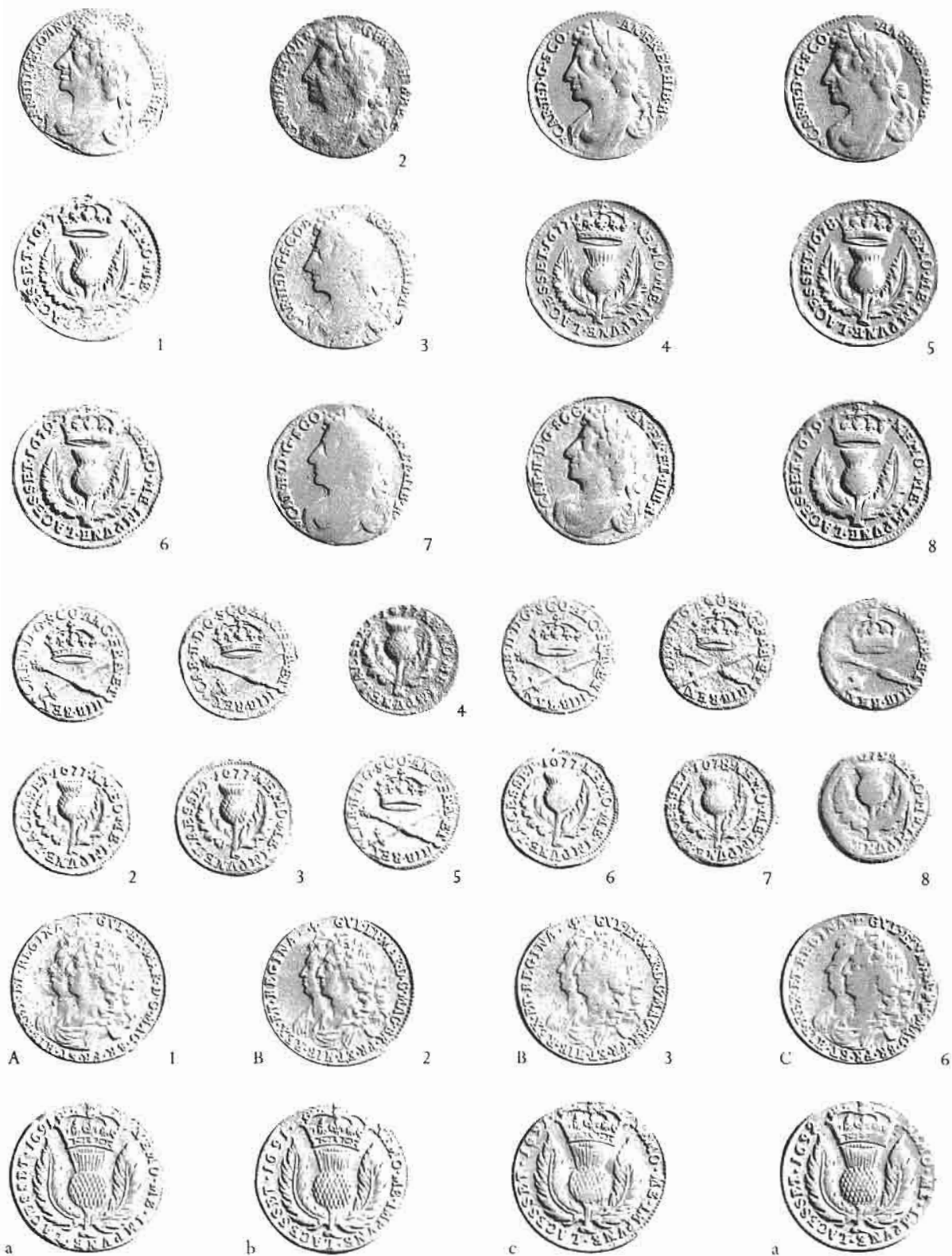
TURNERS 1695-7

(Pl. VII)

1.	Ia Sword to middle of M	1695a Marian type. No stops	O = 2	S* (2.698 g.); BM; RCL; M; etc. (3). Also cast counterfeit (S)
2.	Ia	1695b Marian type. Stops	O = 1, R = 3	S* (2.550 g.); etc. (2)
3.	Ib Sword to L	1695b	R = 2	S*; NMA 1965; RCL; M; etc. (8)
4.	Ic Sword to 1st upright of M. Flaw by MAG	1695d New type. Stops	R = 8, 13	NMA (B.1)*; S; M
5.	IIa Only die reading HIB.R	1695c Marian type. Stops	None	M* (2.339 g.); NMA 1967; BM; RCL; S (2.589 g.); etc. (3)
6.	IIIa Rose above crown	1695e New type. Stops	O = 16	S*; NMA (R.30); M; etc. (3)
7.	IIIb	1695f New type. Stops. 3rd E double-punched	None	NMA* (ex McFie); S (2.618 g.)

<i>No.</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Die-Links</i>	<i>Examples</i>
	<i>Die</i> <i>Remarks</i>	<i>Die</i> <i>Remarks</i>		
8.	IVa &	1695d Flaw develops by l. leaf	O = 17, R = 4, 13	M* (2.702 g.); NMA 1969; RCL; S
9.	Va	1695g Stops. Large c	O = 10, R = 11, 12	S* (2.496 g.); etc. (3)
10.	Va	1695h Stops (also after date). Large c	O = 9	BM*; S (2)
11.	Vb Low B in BR	1695g	R = 9, 12	S*; S; etc. (7)
12.	Vc	1695g	R = 9, 11	S* (2.348 g.)
13.	Vd Flaw at D.G.MAG	1695d Unflawed	R = 4, 8	S* (bad flaw); S (slight flaw); NMA (B.2); RCL; M; etc. (1)
14.	Ve Flaw develops at M	1695j Stops. Bad flaw develops below l. leaf	None	S* (bad flaws); S (no flaws); S (slight flaws); NMA (R.31)
15.	Vf Crack above REX	169(5)k Stops and large c indicate 1695. Elaborate foot to thistle	None	S* (2.411 g.)
16.	IIIa	1696a 1st M double-punched	O = 6, R = 18	S* (2.425 g.); RCL
17.	IVa Slight crack across l. field	1696b	O = 8	S* (2.823 g.); NMA (R.32); M
18.	Vg Slight flaw below sword handle	1696a	R = 16	S*
19.	Vh	1696c 9 over ?	O = 19	S*
20.	Vj	1696d Large numerals. Mark after T	None	S*
21.	Vk	1696e	None	NMA (B.3)*; BM; S; etc. (1)
22.	VI Horizontal flaws across field	1696f Blob at centre of 9	None	M* (2.511 g.); RCL; S; etc. (1)
23.	Vm Flaw by MAG	1696g Stops. Flaw by A. Inscription ragged at bottom	None	S*; etc. (2)
24.	Vh	1697a	O = 19, R = 25	S* (2.584 g.); RCL; etc. (2)
25.	Vn	1697a	R = 24	S*; BM
26.	Vo Blade of sword double-punched	1697b	O = 27, R = 28	S*; 2 NMA (B.4 bis and R.33); etc. (1)
27.	Vo Bad flaw at bottom	1697c Larger numerals	O = 26	S*; M; etc. (3)
28.	Vp	1697b	R = 26	S* (2.774 g.); NM A (B.4)





MURRAY AND STEWART : CHARLES II BAWBEES AND TURNERS, AND WILLIAM & MARY BAWBEES







1a 1



1a 2



1b 3



1c 4



11a 5



111a 6



111b 7



a



b



b



d



c



e



f



IVa 8



Va 9



Va 10



Vb 11



Vc 12



Vd 13



Ve 14



d



g



h



g



g



d



j



Vf 15



111a 16



IVa 17



Vg 18



Vh 19



Vj 20



Vk 21



k



a



b



a



c



d



e



VI 22



Vm 23



Vh 24



Vn 25



Vo 26



Vo 27



Vp 28



b



g



a



a



b



c



b

TWO SCOTTISH SEVENTEENTH-CENTURY COIN HOARDS

R. B. K. STEVENSON AND J. PORTEOUS

Two hoards recently discovered in Caithness and in Islay throw some light on the details of the currency of Scotland during the seventeenth century. The full particulars of these hoards are set out below, together with a table showing the complexion of other seventeenth-century Scottish hoards.¹ We are indebted to Mr. A. S. Adamson, Thurso, for his help with the preliminary listing of the foreign coins in the hoard from Hillhead, Wick. A large part of each hoard was retained for various museums by the Queen's and Lord Treasurer's Remembrancer.

The earlier (Ardnave) hoard, buried after 1640, is a good example of the mid-century hoards which form almost half the total from the century—see pp. 138–9—and which may have been hidden in the Civil War period between 1638 and 1650. There is no way of telling from what has been recorded which silver hoards, if any, were hidden 1650–65, as Commonwealth and Charles II's early English coins do not appear in them. It is noticeable that Scottish silver coins are much less numerous than English, including those of Elizabeth, in hoards deposited in the reigns of Charles I and of James VI/I, except in two placed about 1601. These earliest point back to the very different situation in the last half of the sixteenth century; for in a similar table for 1500–90 (there being no hoards certainly hidden during 1590–1600), the absence of English coins after those of Henry VIII is so striking that it seems unlikely that Elizabeth's coins were circulating in Scotland before 1603, or 1604 when the coinage was harmonized, except in the isles close to Ireland and possibly along the Solway. The continental element, absent from known sixteenth-century hoards after c. 1556, grew rapidly in the first half of the seventeenth century. Crown-sized English or Scottish coins are only recorded then in the Strathblane hoard (SP 23), so it appears that imported 'dollars' supplied much of the need for the larger silver. Most hoards from every part of the country contain them, with no particular emphasis on ports; in this, and in the proportionally high total value of the continental coins compared with their numbers, the Irish hoards listed by W. A. Seaby are similar.²

This element in Scotland seems to have become even more important between c. 1670 and 1696, the time of the second, Wick, hoard (1684–). The table shows Scottish coins then more numerous than before, while English are strikingly fewer; the Hillhead hoard itself is untypical in these respects and in having two pre-Union coins of James VI, so that part of a rather older cache may have been included in it. A single Charles II crown is recorded in Ayrshire SQ 8, and there was one of William III, with three Scottish 'dollars',³ in Botriphnie SU 5. Soon afterwards, the great recoinage of William of Orange flooded Scotland with English coins and, with the assimilation of the two coinages under

¹ Based on a card-index compiled by the late Robert Kerr preparatory to an Inventory of Scottish Hoards after 1500, now made less urgent by I. D. Brown's *Bibliography*. Numbers assigned to hoards in what follows are their *Bibliography* numbers.

² *BNJ* xxix (1958–9), pp. 404–14 and xxx (1960–1), pp. 331–43.

³ 53s. 4d. Scots till revalued at 56s. in 1681: *BNJ* xxxvii (1968), p. 202; xxxviii (1969), p. 118.

Anne, led to the replacement of both continental and Scottish silver coins by English, to judge from the few eighteenth-century hoards known.¹

The continental element in these two hoards is dominated by coins of the Netherlands, as it is in most of those other hoards for which details are available. This is principally a reflection of the predominance of the Netherlands in the monetary affairs of western Europe in the mid-seventeenth century and especially of the stimulus given to the Dutch economy by the flow of money, above all of silver, sent by the Spanish crown to finance the Army of Flanders. This is probably a more important factor in the make-up of these hoards than any special relationship between the Scots and the Dutch fostered by the community of Scots merchants at Veere in Zeeland.

It is not necessary to make any economic distinction between the coins of the United Provinces and those of the Spanish Netherlands, since the coins of both circulated side by side throughout the Netherlands,² and were exported together.³

The Dutch coins in the earlier (Ardnave) hoard have a decidedly northern European cast. The rijksdaalder was *par excellence* the United Provinces' coin for export to the Baltic.⁴ The patagon struck by the Spanish sovereigns, a less valuable coin which commanded less of a premium in international markets, circulated principally within the Netherlands.⁵

An examination of the other foreign coins in the Ardnave hoard reveals an interesting geographical distribution of mints. All these pieces come from mints on or near the Spanish Road, the route by which not only men but money was sent by the Spanish Crown into Flanders, or else from mints situated in the silver-bearing Habsburg provinces. It is curious to see in this hoard, deposited in the western islands of Scotland, just a faint outline of the pattern of the financing of the Spanish military effort in Flanders during the Eighty Years War.

Scarcely any pattern emerges from an examination of the foreign portion of the Hill-head hoard. Here the ducaton and its United Provinces equivalent, the silver rijder, forms an important element. The ducaton was the most valuable silver coin in common use in Europe in the seventeenth century. It was first minted by the Archdukes Albert and Isabella in 1618. It weighed 32.48 g., was 0.944 fine and was tarified at three florins.⁶ The United Provinces' version was first struck at the time of the currency reform and devaluation of 1659.⁷ Although it was intrinsically a shade more valuable (weighing 32.78 g. and of a fineness of 0.941), it circulated at par with the Spanish ducaton, i.e. at 3fls. 3s. in United Provinces currency. It was already, by the date of this hoard, the staple coin of the East India trade, and makes up almost 100 per cent of the contents of the treasure found in *de Liefde*, the Dutch East-Indiaman wrecked on the coast of Shetland in 1711.⁸ There is no question of any of the hoards listed here having any direct

¹ *BNJ* xli (1972), p. 183. All perhaps hidden in the second half of the century. Foreign gold continued in circulation, while prohibition of copper 'letter doits' by Elgin magistrates in 1737 is recorded by the *Dictionary of the Older Scottish Tongue*.

² H. Enno van Gelder, *De Nederlandse Munten* (Utrecht-Antwerp, 1960), pp. 124-5.

³ *Catalogue of Coins of the Netherlands recovered from the Dutch East Indiaman 'De Liefde' wrecked off Out Skerries, 7th November, 1711*, Glendining & Co., Sale Catalogue, 28 Oct. 1969. *Catalogue of Coins etc.*

recovered from the wreck of the Dutch East-Indiaman 'Hollandia' (sunk 1743), Sotheby & Co., Sale Catalogue, 18 Apr. 1972.

⁴ H. Enno van Gelder, *op. cit.*, p. 109.

⁵ *Ibid.*, pp. 124-5.

⁶ H. Enno van Gelder and Marcel Hoc, *Les Monnaies des Pays-Bas Bourguignons et Espagnols 1434-1713* (Amsterdam, 1960), p. 162.

⁷ H. Enno van Gelder, *op. cit.*, p. 223.

⁸ *'De Liefde'* catalogue, *op. cit.*

ENGLAND (AND IRELAND)

I.D. Brown Numbers	Notes	Places	Found	Concealed	Edward & Mary	Elizabeth 1/-	6d.	Smaller	James I. 5/- & 2/6	1/-	6d. etc.	Charles I. 5/- & 2/6	1/-	6d. etc.	Copper
SO 7		Cairnbrogie, Aberdeenshire	1811	1601~											
SO 27	1	Kyleakin, Skye	1951	1601~	1		1								
SO 8		Ardmaddy, Argyll	1955	1605~		4	15	1		4	2				
SO 9		Snizort, Skye	1884	1605~	20	7	11	2	1	6	3				
SO 10		Glenelg, Invernesshire	1958	1621~	6	1	13	2		2					
SO 18		Kincardineshire	1806	~1625											
SO 28		Northill, Kincardineshire	~1818	1623~											
SP 31	2	Cromarty, Rossire	1916	1635~	2	1	15	6		2	3		1		
SP 2	3	Banff, Banffshire	1952	1636~											
SP 23		Strathblane, Stirlingshire	1793		X	X			X	X		X	X		
SP 12		Irvine, Ayrshire	1923		30	10	114	33		14	26	1	33	26	
SP 11		Invergordon, Rossire	1852	1638~									X		
SP 19		Baads, Aberdeenshire	~1851	1639~											
SP 35		Ardnave, Islay	1968	1640~	1	23				17		7	3		
SP 3		Bankhead, Aberdeenshire	1862	1640~		9	6			6	3	1	1		
SP 34	4	Loch Dochart, Perthshire	~1906	~1642											
SP 24	4	Pow, Orkney	1955	~1642											4
SP 5	4	Brimmond, Aberdeenshire	1942	~1642	1			1							
SQ 12	5	Knowehead, Banffshire	1863	1643~						1	2	3	1	5	
SQ 13	6	Glenbeg, Moray	1864	1643~	14	2	23	6							
SP 21		Rannoch, Perthshire	1875	1644~		10	40		1	3	14	14	48	14	
SP 40		Chapelton, Ayrshire	1870	1645~	2	56	66	1		34	5	19	31	2	
SP 46		Barbreck, Argyll	1871	1645~											
SP 17		Fisherrow, Midlothian	1951	1646~	2	41	84			26	15	22	102	10	
SP 10	7	Grangemouth, Stirlingshire	1899	1646~		85	94		11	67	37	272	263	17	
SP 4	8	Birdston, Stirlingshire	1790			X			X	X		X	X		
SP 6	8	Carlisle, Lanarkshire	1782			X	X		X	X	X				
SP 15	8	Kippendavie, Stirlingshire	~1863		2	5	3			6		11	16	1	
SQ 1		Stornoway, Lewis	1954	1669~		17	24		1	14	6	10	27	3	
SP 8	9	Duns, Berwickshire	1858	1671~	2	55	67			13	40	5	156	4	
SQ 2		Kilmarnock, Ayrshire	1920	1671~		5				4			7		
SQ 4		Old Monkland, Lanarkshire	1877	1672~		1	3						2		
SQ 5		Annat, Argyll	1872	1675~											
SQ 8		Ayrshire	1804	1675~		X			X?						
SQ 6		Georgemas, Caithness	1876	1677~			1								
SQ 11	10	Laxdale, Lewis	1962	1677~											
SQ 10		Kilmarnock, Ayrshire	~1863	1677~						1			1		
SQ 16	11	Chapelhall, Lanarkshire	1921	1677~											
SQ 7		Mashock, Lanarkshire	1872	1679~				N		1		L			
SQ 19		Wick, Caithness	1969	1684~		1	1			1			2		
SU 3		Barrock, Caithness	1920	1689~											
SU 2		North of Scotland	1848	1689~											
SU 9		Gunnister, Shetland	1951	1690~											
SU 4		Ballinghard, Colonsay	~1859	1694~											
SU 11		Tranent, East Lothian	1967	1697~											
SU 5	12	Botriphnie, Aberdeenshire	1864	~18c.											
SU 6	13	Gienquich, Perthshire	1876	~18c.											

SCOTLAND							SCOTLAND & ENGLAND							FOREIGN				GOLD				
James V & Mary	James VI ~ 1604	Silver 1605-1625	Copper	Charles I ~ 30/-	Smaller silver	~ 1639 copper	Charles I & II copper	Charles II 1664-75	1675 ~ 1681	1677-9 copper	English silver	James VII silver	Copper	William & Mary, William	Scottish silver	English silver	Copper	Spain & Spanish Netherlands	United Provinces	Other silver	Copper/Billon	
5	X																					X Scots
	85																	N 1 L				
	15	3																2				
	1	1																		1		
			N	1	L															1		
																						19 (1 Fr.)
	1																	~40		?		
																		6		6		
																		1		2		
	10				X	40													X			2 Eng.
																		2				
																		c.50				
			N	1	L													?	(25)	2		
			N	1	L													7	11	12		
																		6				
	3		4				87															
							130															
							60															3
	1		X		1	c.2000																X
					1	500+																5
				1														10				
			N	1	L															N 1 L		
			N	1	L															6		
						2	2?											11	1			
	3				2													(2	4	3)		
																			X	X		
			X																			
		1																3		2		
		1																5	8	1		
	1		N	1	L															2		
							88?	2		?	4E											
								82														
								X	X	1E										20		
								5		139								X		X		
								4	1											1		
								9	2		1E									113		
								11	3											5		
				3																		
	2		N	1	L													1				
																				21		
																		31	16	19		
																			N 1 L			
			N	1	L													1		X		

1. Perhaps after 1603, because of English coins.
2. Details not published before.
3. Published date of latest coin should be corrected from 1631 to 1636.
4. Concealment unlikely after 3rd issue turners began.
5. Included Louis XIV (1643–), so large turners assumed.
6. Turners CR without II now considered to be Charles I 3rd issue.
7. Latest of few kept in NMAS dated 1646.
8. Civil Wars period?
9. *Bibliography* summary incomplete.
10. Details not published before: Merks 1664, 1671 (3), $\frac{1}{4}$ dollar 1677.
11. Ditto: Chas. I, Thirty-shilling piece, 3; Chas. II, 'merks', 1669 5, 1670 2, 1672 3, 1675 1, 1676 2, 1677 1; Dollars, Austria, Ferdinand 2; Denmark, Christian IV 1627 1; St Gall 1621 1; Schaffhausen 1623 1; U. Prov., Overijssel $\frac{1}{2}$ dollar 1629 1.
12. No dates recorded.
13. All appeared to have been long in circulation.

Hoards listed in *Bibliography* but not tabulated here; marked C when known to have contained one or more continental coins:

Seventeenth century?: SP 44 Longforgan, Angus C (all Henry IV 1553–1610).

Elizabeth (and James VI?)—post-1603?: along Solway SO 30, SO 33 C, SO 39 C; SZ 21 Berwicks. C. James VI 1603–: SO 34 C, SO 35.

Charles I, Civil War?: SP 9, 13, 14, 16, 18 C, 20 C, 26, 28, 29, 30, 32, 33, 36, 37, 41.

Charles I or II (coppers): SP 1, SP 39, SQ 14.

Charles II: SQ 9 C, SQ 17, SQ 18 C.

William II: SU 7, SU 8 C, SU 10.

connection with wrecks, but the ships which passed the Scottish coast in the latter part of the seventeenth century on the way to the East Indies may well have put into Scottish ports from time to time, and may have been one source of this element in Scottish currency.

The other foreign coins in the Hillhead hoard are drawn from many parts of Europe. No evident pattern emerges in this instance, but it should be noted that the patagons and ducats of Liège were of the same standard and circulated at the same rate as their equivalents from the mints of Antwerp and Brussels.

The evidence of the hoards is substantiated in the volumes of the Register of the Privy Council of Scotland by a few of the vast number of legal cases recorded, but particularly by various acts and proclamations.¹ In inflationary times there was apparently a tendency for Scottish silver coin to be undervalued, making it worth exporting in return for foreign coin which was over-priced when put into circulation. The long series of issues of James VI in the sixteenth century, up to that of 1602–4, though criticized by Burns as not really intended to replace one another and earlier issues, but simply to provide profit by inflationary revaluation, may have checked coin export, which was specifically prohibited in 1578 and 1601. The Government also attempted to get merchants to bring back, as part of the price of their goods, bullion for minting (1597 and 1603).² But, instead, the foreign coin in circulation increased. In 1602 there was a prosecution for 'out putting and exchanging certain foreign dollars', and in 1611 a proclamation prohibited the currency of Swedish and Zeeland dollars 'brought in of late'; next month there is evidence of sums up to 6,000 dollars having been spent by burgesses of Dundee

¹ *RPCS* 1545–1691; three series 1877–1970, i–xiv, i–viii, i–xvi.

² *RPCS* vi. 528, cf. xi. 339 (1618).

at each of the various fairs in Aberdeenshire to buy cloth, and at 33 per cent above their worth. Incidentally, the clipped state of English and Scottish coins in the Wick hoard is reflected in one case in 1611 where a St. Andrews merchant was found to have $3\frac{1}{2}$ boxes of clippings.¹

In 1612, besides raising the rate at which the Mint would buy, so that all foreign gold and silver should be brought to it, the Privy Council sought the advice of the English Privy Council on the circulation of foreign coin, and were given the 'maxim in the matter of coin, a rule to be observed' that no 'kind or species soever should be current'.² In 1613 a long proclamation stated that foreign and decried Scottish coin was as frequent and openly used as the lawful coin of the kingdom, and encouraged its consignment to the Mint as bullion by specifying the rate of each kind (and its fractions), eleven being foreign silver.³ In 1619 the export of bullion and the circulation of the foreign coin 'brought home in great abundance' and 'universally current' are again prohibited, yet there had to be a Royal letter in 1620 by which 'in respect of the scarcity of money' in Scotland 'we would grant a toleration of some foreign coin to be current'.⁴ Gold coins were particularized, but in 1624 the Mint was instructed to report on the weight and fineness of dollars in circulation for the guidance of the public.⁵ The balance of trade and the need to increase the stock of coin in the kingdom led the king to propose to the Estates in 1625 to raise the value of their money as other countries had done, but in 1627 the Council decided against any changes, including 'restraining the course of dollars' although 'the most part' of the money in circulation was over-valued foreign coins.⁶ Discrimination was attempted in 1628-9 in favour of the best quality dollars (rex) and prohibition of the worst (Emden, and $\frac{1}{4}$ dollars called 'Orts'), and lion dollars were mentioned with approval, after a perhaps over-zealous move to prevent lion or dog-dollars being brought in by coal exporters.⁷ In 1632, on the recommendation of the king, a memorandum by Briot on rectifying the abuses of current foreign coin was considered by the Council,⁸ and the 'great scarcity' of Scottish coin was partly remedied by the issue of copper from 1632 and of silver from 1636 by Briot and Falconer. Some regulation of foreign inflow may have been effected; in 1642 weight and prices of allowed imports are specified, for rix dollars, ryalls, and quarter-écus (cardecues).⁹

After the Restoration import of copper coin became a problem and was prohibited in 1662 except for French doubles or doits to pass for 1*d.* Scots (the smallest native coin being the 2*d.* turner), and they too in 1674; further prohibition was necessary in 1686.¹⁰ In 1667 over-pricing of foreign silver was being condoned because of the loss that would be caused by crying it down to its own due value, 'seeing the far greatest part of the money of the kingdom is foreign coin'; one coin that was undervalued in Scotland should be encouraged, the ducaton (dowcat donne).¹¹ The old themes however recur: 'the great scarcity of the stock of coin . . . and the frequent exportation of even of the small quantities' of silver that used to be coined in His Majesty's Mint are complained of in 1677, and the policy is enunciated of keeping out coarse foreign coin by allowing finer.¹² The complication of accounts necessitated by the foreign coins can be seen in a list of

¹ 1602-11—*RPCS* vi. 745, ix. 248, 259, 139.

² *RPCS* ix. 739.

³ *Ibid.* x. 79-81.

⁴ *Ibid.* xi. 533, xii. 767-8.

⁵ *Ibid.* xiii. 530.

⁶ *RPCS* i. 159-60, 629-31.

⁷ *Ibid.* ii. 162, 192, 540-1, iii. 8, 19.

⁸ *Ibid.* iv. 578-82.

⁹ *Ibid.* vii. 224; ryalls = 8 reales?

¹⁰ *Ibid.* i. 202, iv. 289, xii. 222.

¹¹ *Ibid.* ii. 380.

¹² *Ibid.* v. 124.

payments and charges referred to in a court case of 1691 'charges already before the Council to advocates, Council clerks etc. 25 rix dollars i.e. £72. 10. . . . Receipt by the Clerk of Fraserburgh 6 dollars'.¹

HILLHEAD, WICK, FIND

Wick, Caithness—73 coins; found on 30 January 1969 on site of new primary school at Hillhead (ND 37305125) beside old wall foundations by two workmen of the County Council's contractors, Alexander Ross and John Williamson.

ENGLAND (5)

Elizabeth

1. shilling, i. m. martlet (1560–1), slightly clipped
2. shilling, 2 (1602–3), clipped

James I

3. shilling, 5th bust, badly clipped, bent

Charles I

4. shilling, crown (1635–6) (North 2225), slightly clipped?
5. shilling, (R) (1644–5) (2232), clipped

SCOTLAND (2)

James VI

- 6–7. thistle merks (1601–4), very worn, clipped

CONTINENTAL (66)

SPANISH NETHERLANDS (31)

Brabant (28)

Albert and Isabella, Brussels (m.m. face)

- 8–9. patagon VGH 311–3a and 3b, undated (1612–21), 1621

Philip IV, Antwerp (m.m. hand)

10. ducaton type I VGH 327–1a, 1636
- 11–20. ducaton type II VGH 327–1b, 1636, 1637, 1647, 1648, 1649, 1659, 1662 (4)
21. demi-ducaton type II VGH 328–1b, 16758

Philip IV, Brussels (m.m. face)

- 22–4. patagon VGH 329–3 1622, 1624 (ARCHD), 1625
- 25–7. ducaton type II VGH 327–3b, 1630 or 50? (? Bruges), 1636, 1654

Charles II, Antwerp

28. patagon type I VGH 350–1a, 1672
- 29–30. ducaton type I VGH 348–1a, 1672, 1679
31. demi-ducaton type I VGH 349–1a, 1666
32. demi-ducaton type III VGH 349–1b, 1684, latest coin in hoard

Charles II, Brussels

- 33–4. patagon type I VGH 350–2a, 1673, 1680
35. ducaton type I VGH 348–2a, 1676

¹ *RPCS*³ xvi. 415. Widespread references in burgh, university, and other accounts to payments in dollars

between 1629 and 1672 are given s.v. *dollour* in the *Dictionary of the Older Scottish Tongue*.

Flanders (3)

- Philip IV, Bruges (m.m. lis)
36. patagon VGH 329-6, 1663

Charles II

- 37-8. patagon type I VGH 350-4a, 1667, 1675

UNITED PROVINCES (16)

Friesland (1)

39. Leeuwarden, half-rijksdaalder Delm. 960, 1609

Gelderland (1)

40. Harderwijk, rijksdaalder Delm. 938, 1649

Holland (5)

- 41-2. Amsterdam, silver rijder Delm. 1017, 1672; Delm. 1018, 1673
43. Dordrecht, half-rijksdaalder Delm. 871, 1625
44. Dordrecht, silver rijder Delm. 1014, 1676
45. Dordrecht, silver ducat Delm. 969, 1673

Overijssel (2)

46. Kampen, silver rijder Delm. 1040, 1676
47. Kampen, silver ducat Delm. 992, 1659

Utrecht (1)

48. Utrecht, silver rijder Delm. 1029, 1667

Westfrisia (3)

49. Hoorn, gehelmde rijksdaalder Delm. 923, 1592
50-1. Hoorn or Enkhuizen, silver rijder Delm. 1019, 1672, 1674

Zeeland (3)

- 52-3. Middelburg, silver rijder Delm. 1024, 1668 (2)
54. Middelburg, half-silver rijder Delm. 1051, 1661

HOLY ROMAN EMPIRE (17)

*Austrian Circle (3)**Salzburg*

55. Archbishop Paris von Lodron, thaler 1648

Tirol

- 56-7. Archduke Ferdinand (1564-95), thaler Hall, Enzenberg 316 var. undated (2); MW scratched on obv. of one

Liège (10)

Maximilian Henry of Bavaria, Archbishop of Cologne

- 58-66. patagon Delm. 471, 1663, 1666 (2), 1668, 166?, 1671, 1674, 1676 (2)
67. ducaton Delm. 473, 1677

*Lower Rhenish Circle (1)**Erfurt*

68. thaler Leitzmann 498, 1621

*Upper Rhenish Circle (1)**Imperial city of Frankfurt am Main*

69. thaler in name of Emperor Ferdinand II, Joseph & Fellner 374 var. 1621

*Westphalian Circle (1)**Reckheim*

70. Count Ernest von Lynden in name of Emperor Ferdinand II, thaler c. 1620

*Switzerland (1)**Basel*

71. thaler, 1639 Ewig 164

MONACO

72. Honoré II, scudo Corpus Numm. Ital. II p. 122, 4 1649

DENMARK

73. Frederick III, Kongsberg (Norway) speciedaler Hede 30 1658

ARDNAVE FIND

Ardnave, Loch Gruinart, Islay (NR 290747)—81 coins; found in sandhills, September 1968, mainly by Mr. and Mrs. Donald MacKenzie, Bowmore, but two (marked *, Elizabethan shillings) handed in by Mr. Thomas Epps, tenant of Ardnave.

ENGLAND (51)

1. Edward VI shilling, bust facing, i. m. : y : (1550-1), date illegible, much worn

Elizabeth shillings (all hammered)

- 2-3. i.m. lis (1558-60), beaded circle, one with small scratched w on obv.
 *4-7. cross-crosslet (1560-1)
 8-11. martlet (1560-1), one less worn (no shillings issued 1561-82)
 12-13. bell (1582/3-83)
 14-15. Π (one obv. Π) (1583-84/5)
 16. tun (1591/2-94), little wear
 17-20. woolpack (1594-95/6)
 21. key (1595/6-97/8)
 22. anchor (1597/8-1600)
 23. 1 (1601-2), little wear
 24. 2 (1602-3), little wear

James I shillings, 1st Coinage

- 25-8. thistle (1603-4), 1st bust
 29-31. lis (1604-5), 2nd bust

James I shillings, 2nd Coinage

32. lis (1604-5), 3rd bust
 33-4. rose (1605-6), 3rd bust
 35-7. rose (1605-6), 4th bust
 38. coronet (1607-9), 4th bust
 39. key (1609-10), 5th bust
 40. bell (1610-11), 5th bust
 41. tower (1612-13), 5th bust, large scratched w on obv.

Charles I Halfcrowns, all extensively clipped (refs. Seaby and North)

- 42. harp (1632-3), obv. 2c (2207), obv. leg ends ·∴·
- 43-4. portcullis (1633-4), 2c
- 45. bell (1634-5), 3a¹ (2209)
- 46-7. crown (1635-6), 3a¹ (2209), one with ·∴· before and after rev. leg.
- 48. tun (1636-8), 3a¹ (2209)

Charles I Shillings

- 49. portcullis, 3a¹ (2223)
- 50. tun (badly clipped), 3a (2225)
- 51. triangle (1639-40), 4¹ (2231), latest coin in hoard

SCOTLAND NIL

CONTINENTAL (30)

SPANISH NETHERLANDS (7)

Brabant (6)

- Albert and Isabella, Antwerp (m.m. hand)
- 52. patagon VGH 311-1b 1620

Albert and Isabella, Brussels (m.m. face)

- 53. patagon VGH 311-3a undated

Philip IV, Antwerp

- 54-5. patagon VGH 329-1 1624, 1631

Philip IV, Brussels

- 56. patagon VGH 329-3 1633
- 57. $\frac{1}{2}$ patagon VGH 331-3 1631

Tournai (1)

Philip IV, Tournai (m.m. tower)

- 58. patagon VGH 329-9 1634

UNITED PROVINCES (11)

Gelderland (2)

- 59-60. Harderwijk, rijksdaalder Delm. 938 1611

Holland (1)

- 61. Dordrecht, rijksdaalder Delm. 939 1625 (unpub. date)

Overijssel (2)

- 62-3. Kampen Deventer or Zwolle, rijksdaalder Delm. 947 162?, 1622

Utrecht (2)

- 64-5. Utrecht, rijksdaalder Delm. 942 1622

Westfrisia

- 66. Hoorn or Enkhuizen, rijksdaalder Delm. 940 1620

Zeeland (3)

- 67-8. Middelburg, rijksdaalder Delm. 941, 1622, 1623
- 69. Middelburg, $\frac{1}{2}$ rijksdaalder Delm. 957, 1620

HOLY ROMAN EMPIRE (12)

Bohemia (1)

70. Rudolph II, thaler, Kuttenberg 1592 (mint-master G. Salvy v. Olivet)

Carinthia (2)

71. Ferdinand II, thaler, Klagenfurt 1621 (mint-master Melchior Putz)
72. Ferdinand II, thaler, St Veit 1624 (mint-master Hans Matz)

Austrian Circle (5)

Alsace

- 73-5. Archduke Ferdinand (1564-96), thaler,
 Ensisheim, varieties of armour, undated
76. Archduke Leopold, thaler, Ensisheim (mint-master Peter Balde, date in front of bust), Enz.
 10 var. 1620
77. another, date below bust, Enz. 10 var. 1620

Tirol

78. Archduke Leopold, thaler, Hall Enz. 246 var. 1628

Upper Rhenish Circle (3)

Imperial City of Konstanz

79. thaler in name of Ferdinand II, Nau 208 1626

Imperial City of Frankfurt am Main

80. thaler in name of Ferdinand II, Joseph & Fellner 374 a var. 1622

Hesse

81. Landgrave Philip the Magnanimous, thaler, last type 1563-7

THE DUNCHURCH AND STAFFORD FINDS OF EIGHTEENTH-CENTURY HALFPENCE AND COUNTERFEITS

P. H. ROBINSON

THE recently published *Bibliography* has shown that there is a small but distinct group of hoards deposited in England between 1672 and c. 1825 which consisted either entirely of copper coins, often in extremely large numbers,¹ or of mixed copper and low denomination silver coins, with the former predominating.² Such hoards are to be associated with the working classes, including such persons as small shopkeepers, innkeepers, and toll-gate keepers. From England there is no true currency hoard deposited between these dates which consisted of mixed gold, silver, and copper coins.³ Regrettably few finds of this type have been published even in the form of a preliminary note, and fewer still have been preserved intact in museums. The two eighteenth-century hoards described below are of particular interest in that they appear to be the only copper hoards from the West Midlands at present known for this period, during which Birmingham, with the adjacent manufacturing towns in the Black Country, established itself as a major centre for the production and distribution of both counterfeit and 'evasive' copper coin. The finds illustrate in addition, what the few detailed accounts of similar hoards have also shown, that the contents of such hoards are extremely diverse and invariably of great interest.⁴

In the descriptions of the coins below, weights are given in grains to the nearest 0.5 of

¹ *Bibliography*, nos. EU 4 (Redcar, York), with 250 plus Æ coins; GA 4 (Haslingden, Lancs.) with 132 plus (not 132 as stated in the *Bibliography*) Æ coins; GC 6 (Grove Park, London) with 'large quantities' of Æ coins; GD 3 (Ringles Cross, Uckfield, Sussex) with 749 Æ coins; GD 37 (Barvas, Isle of Lewis) with 12 Æ coins; GD 30 (Wath upon Dearne, Yorks.) with 110 Æ coins; to which may now be added the find described below from Dunchurch, Warwickshire (*Bibliography* (First Addendum), GC 12) with 89 Æ coins. *Bibliography* references are to I. D. Brown and M. Dolley, *A Bibliography of Coin Hoards of Great Britain and Ireland 1500-1967*; *Bibliography* (First Addendum) references are to I. D. Brown, 'First addendum to the Bibliography of Coin Hoards of Great Britain and Ireland 1500-1967', *SNC* 1973 pp. 47-51.

² The second hoard from Upper Dean, Bedford (*Bibliography*, GC 1)—see the following note—comprising 5 R and 34 Æ coins; *Bibliography*, GD 38 (Stafford, Mill Street), also the subject of this article, with 2 R and 13 Æ coins; *Bibliography* (First Addendum), EU 7 (London, Queenhithe/Southwark Bridge, deposited in c. 1696), comprising 1 R (William III sixpence, 1696) and 31 plus Æ and tin coins (Ivor Noël Hume, *Treasure from the Thames* (1956), pp. 227 f. The

exceptions are *Bibliography*, GD 6 (Montcoffer, Banff) with 215 R and 172 Æ , regarding which see below, p. 155; and GA 1 (Broughton Astley, Leics.) with 14 plus R and 2 Æ , where the 2 farthings may be incidental additions, although the account of the find does not preclude the possibility that more Æ coins were present.

³ *Bibliography*, GC 1 (Upper Dean, Bedford) clearly consists of two separate finds concealed in the same house and discovered in separate places when it was demolished: (a) the 10 guineas, ranging in date from 1685-1746, plus another gold piece which may or may not have been a guinea; (b) the five low denomination R coins together with 34 Æ coins. The types and dates of these are not specified and thus the date of deposition is uncertain; but as the two finds could be treated as one in the inquest and in the accounts of the discovery, it seems likely that the coins were approximately of the same date.

⁴ For example, the presence in *Bibliography*, GA 4 (Haslingden, Lancs.) of 4 pattern farthings (according to the account of the find in *SNC* 1921, pp. 405 f., but one tends to prefer the *Bibliography*'s 3), and several coins in the Lochgelly find described elsewhere in this volume of *BNJ*.

a grain.¹ More precise figures would be unnecessary as the coins are in the main very worn and occasionally bear some patina. The diameters are also given in mm. (with maximum and minimum figures when the coin is markedly elliptical) to enable comparison to be made with the figures given by Peck for the English regal issues represented. The difficulty lies in satisfactorily distinguishing between counterfeits and genuine coins. Counterfeits might be cast from the originals or struck from very skilfully made dies, and thus style is not always a satisfactory criterion, particularly since the standard of workmanship of the original dies was at times poor, and the coins under consideration are very worn. Weight is also an unsatisfactory criterion on its own. Counterfeit coins need not always weigh less than their prototypes; the weight range of the original coins, as shown by Peck, is quite wide; and considerable allowance must be made for wear, possibly in the region of a quarter of the weight when struck. There remain metal content and size of flan. To assess the former is still impracticable when dealing with a large hoard of this kind, and would not necessarily identify as false light-weight counterfeits made from melted-down official coin. The latter involves accepting the figures given by Peck, but the proportion of the coins in the Dunchurch find, described below, which come below the range given for the type by Peck causes one to speculate whether future research will cause the range to be extended. In short, only the obvious counterfeits are indicated as such and it is probable that a high proportion of the remainder are also false.

DUNCHURCH, WARWICKSHIRE. *BIBLIOGRAPHY*
(FIRST ADDENDUM), GC 12

This hoard of eighty-nine halfpennies was found on 18 September 1961 loose in the earth at a depth of about 4' 6" at Dunchurch, near Rugby, approximately twenty yards from the bridge at the bottom of Sand's Hill. Part of it, comprising twenty-eight coins, was submitted by Mr. J. R. Nixon of Atherstone to Birmingham Museum, which subsequently acquired the eighty-nine coins. The exact size of the find is uncertain, but it is believed to be more or less intact as it stands. There was no trace of a container but it is difficult to believe that so many coins had not been in a bag of some sort which had rotted away. The coins are as follows:

ENGLISH
WILLIAM AND MARY²

No.	Date	Wt./gr.	Diameter/mm.	Remarks
1.	(1694)	146	28.1	
2.	(1694)	117.5	26.9	
3.	(1694)	110	27.6	NI engraved on rev.
4.	(1694)	107.5	27.7	
5.	(1694)	86	27.8	Cast counterfeit.

WILLIAM III

Type 1³

6.	1696	148.5	29.2/28.7	Obv. filed.
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¹ The coins from both finds were weighed by the Weights and Measures Department of Stafford Corporation, and I am most grateful to Mr. K. Hughes for permitting this.

² The weight range given for this issue by Peck is

139.6–182.0 gr. and the diameter range 28–31.5 mm. (*English Copper, Tin and Bronze Coins in the British Museum 1558–1958* (1960), p. 162).

³ Peck (*ibid.*, p. 170) gives the weight range as 136.5–180.7 gr. and the diameter range as 28–29.5 mm.

No.	Date	Wt./gr.	Diameter/mm.	Remarks
7.	1697	140.5	29.1/28.3	
8.	Illeg.	162.5	28.4	Weight slightly above average.
9.	Illeg.	142	28.7/28.1	
10.	Illeg.	141	28	
11.	Illeg.	135	27.5	
12.	Illeg.	134.5	28.4/27.5	
13.	Illeg.	129	28.2/27.5	Possibly counterfeit.
14.	Illeg.	119	28.1/27.6	Possibly counterfeit.
Type 2 ¹				
15.	1699?	127.5	27.7	
Type 1 or 2				
16.	Illeg.	141	27.6	
17.	Illeg.	129	27.3	Cast counterfeit: mould line visible and edge filed to remove this.
18.	Illeg.	120	27.6	Cast counterfeit: mould line visible in parts.
19.	Illeg.	115	27.6/27	Cast counterfeit: mould line visible in parts.
20.	Illeg.	111	27.8	Cast counterfeit: mould line visible in parts and traces of vertical filing around edge.
21.	Illeg.	101.5	26.5	Light weight cast (?) counterfeit, with edge hammered to simulate thickness.
Type 3 ²				
22.	1700	124	27.3	Peck—(large 00 in date).
23.	1700?	117	28.4/27.8	Cast counterfeit: slight traces of mould line visible.
24.	1701	123.5	27.8/27.4	
25.	Illeg.	151	27.9	
26.	Illeg.	132.5	28.4/28.1	Cast counterfeit? Edge filed possibly to remove mould line.
27.	Illeg.	129.5	27.7/26.1	Obv.: S touches king's hair, cf. Peck 690 and 691.
28.	Illeg.	119.5	27.5/26.9	Cast counterfeit?
29.	Illeg.	118.5	27.1/26.7	Cast counterfeit?
30.	Illeg.	104	26.8/25.9	Cast counterfeit: traces of mould line visible.
31.	Illeg.	116	27.4/27	Cast counterfeit?
Type uncertain				
32.	Illeg.	112	27.5	Cast counterfeit?

GEORGE I

2nd issue³

33.	1720	108.5	26.9/26.3	Struck counterfeit, with both dies flawed.
34.	1723	92	26.9/26.4	Cast counterfeit: simulated oblique and occasionally vertical graining (not ordinary file marks) around edge. ⁴
35.	1724	129	27.4/27	Peck 806 or possibly a counterfeit cast of it.
36.	1724	113	27.2/26.8	Probably a counterfeit cast from Peck 806. Possible traces of mould line.

¹ Peck (*ibid.*, p. 172) gives the weight range as 147.3–181.1 gr. and the diameter range as 28–9 mm.

² Peck (*ibid.*, p. 173) gives the weight range as 138–192.7 gr. and the diameter range as 28–29.5 mm.

³ Peck (*ibid.*, pp. 119 and 202) gives the weight range as 144–160 gr. and the diameter range as 27.5–28.5 mm.


⁴ Peck lists three halfpennies of George I with

obliquely grained edges, all dated 1719: no. 782, a *1st Issue* halfpenny on a *2nd Issue* flan; nos. 792 and 794, both *2nd Issue* coins. Two farthings also appear with straight grained edges, nos. 812 and 820, both dated 1720. He comments (*ibid.*, p. 201) that at this time the Mint was obviously toying with the idea of grained edges.

No.	Date	Wt./gr.	Diameter/mm.	Remarks
37.	Illeg.	136	29.3/28.5	Slightly larger than normal.
38.	Illeg.	127	27.7	Traces of a series on the obv. of a series of round punch marks filled with criss-cross lines.
39.	Illeg.	122	28.2/27.7	Cast counterfeit: traces of mould line visible, together with oblique file marks around edge.
40.	Illeg.	120.5	27.8/27.3	Cast counterfeit?
41.	Illeg.	120	27.8	If genuine an unrecorded variety with straight graining around edge. ¹ M punched on obv. and M A on rev.
42.	Illeg.	69.5	27.8/26.8	Struck counterfeit.

GEORGE II

Young head type²

43.	1732	114	27.7/27.2	Filed around edge and probably a cast counterfeit.
44.	1733	123	27.9/27.2	Struck counterfeit with what appears to be graining on one section of the edge.
45.	1734	124	27.6/27.3	
46.	1734	116	27.5/27	Struck counterfeit.
47.	1736	143	28.4/27.5	
48.	1736	117	27.2/26.8	Cast (?) counterfeit with widely spaced oblique lines around edge.
49.	1737	137	28.8/27.5	Cast counterfeit in inferior copper. Mould line visible.
50.	1737	73.5	26.7/26.3	Struck counterfeit with edge hammered to simulate thickness.
51.	1738	145	28.9/28.5	
52.	1738	105.5	27.7/27	Struck counterfeit.
53.	1738	102	28.2/27.2	Struck counterfeit.
54.	173-	117.5	28.3/27.3	Struck counterfeit. Merchant's mark  (or imitation thereof) on obv. ³
55.	Illeg.	120	26.9	Struck counterfeit with filed edge. Date may read 17££d).
56.	Illeg.	140	27.8/27	
57.	Illeg.	136.5	28.3/27.4	Cast counterfeit.
58.	Illeg.	132.5	27.2	Struck counterfeit. T punched on obv. Incised oblique lines around rim on rev. Edge hammered and large gash in edge.
59.	Illeg.	129.5	26.8	Cast counterfeit: edge filed but shows traces of mould line.
60.	Illeg.	126	27.7/27.2	Cast counterfeit: file marks around edge and traces of mould line.
61.	Illeg.	107.5	28.9/27.3	Cast (?) counterfeit.
62.	Illeg.	119.5	27.6	Struck counterfeit of crude style.



Old head, GEORGIUS TYPE⁴

63.	1744	116.5	27.9/26.5	Struck counterfeit.
64.	1745	140	28.2	
65.	1745	136	28/27.7	
66.	1745	134	28.1/27.5	Struck counterfeit.
67.	1745	132.5	27.6/27.1	
68.	Illeg.	137	28.1/27.1	
69.	Illeg.	114	27.9/27.4	Struck counterfeit. Obv. double-struck.

¹ Peck lists only farthings with straight graining, both dated 1720.

² Peck (*ibid.*, pp. 208 f.) gives the weight range as 145.4-163.9 gr. and the diameter range as 28.5-29.5 mm.

³ No identical mark is given in F. A. Girling,

English Merchants' Marks (1964), but cf.  on p. 53, no. 2, from Dedham, Essex, or  on p. 88 from Chipping Norton.

⁴ Peck (*ibid.*, pp. 208 and 211) gives the weight range as 132.6-160.3 and the diameter range as 28.5-29.5.

No.	Date	Wt./gr.	Diameter/mm.	Remarks
Old head, GEORGIVS type				
70.	1739!	123	28.9/27.8	Crude struck counterfeit combining an <i>Old Head</i> style obv. with a reverse of a <i>Young Head</i> period coin.
71.	1748	133.5	27.9/27.4	Cast counterfeit with what appeared to be traces of semi-oblique graining around edge.
72.	1748	127.5	27.7	Cast counterfeit. Obv. apparently from a regular coin; rev. from a counterfeit coin.
73.	1748	119.5	28	Cast counterfeit with edge filed.
74.	1749	140	29	
75.	1750	131	28.4/27.7	Struck counterfeit.
76.	1750	118	27.7/27.3	Struck counterfeit.
77.	1750	113	28.1/27.5	Struck counterfeit of particularly good workmanship.
78.	1751	133.5	28	Struck counterfeit, with obv. smaller than the reverse.
79.	1751	120	27.4/27	Struck counterfeit.
80.	Illeg.	117.5	27.5	Cast (?) counterfeit: edge filed.
81.	Illeg.	101.5	27.2/26.9	Struck (?) counterfeit.

ANGLO-IRISH

Charles II, Armstrong's and Legg's Regal Coinage

82. Illeg. 63 2.45/2.42

George I, William Wood's Coinage, class II

83. 1723 112 27.3/26.6 Making allowance for wear, at the time of striking this coin must have weighed well above the average for the issue (116.5 grains,¹ while Young allows a weight range for the issue of between 96 and 120 grains).²

George II, Young head type 1³

84. 1738 129 27.7/26.6
85. 173- 108.5 27.1/26.3 Struck counterfeit.

Type 2

86. 1742 122.5 27.5/26.9 Struck counterfeit.

BLANK

Halfpenny-size flans

87. 118 27.4/26.9 Traces of filing around edge.
88. 114 28/27.5
89. 111.5 28.2

The absence of George II *Old Bust* type halfpennies dating after 1751 would suggest that, in spite of the wear on coins of that date and of dates immediately preceding it, the hoard was deposited either in or very shortly after that year. Copper coins when carried about in largish amounts loose in bags may have tended to become worn quite quickly. The genuine halfpennies of William and Mary and William III in the find show that under such conditions halfpennies could become practically smooth within a period of about fifty years.

Regrettably there is no other English hoard of this period with which the Dunchurch find may satisfactorily be compared. The composition of English copper hoards of the

¹ Sir John Craig, *The Mint* (1953), p. 370.

² Derek Young, *Coin Catalogue of Ireland* (4th edn., 1969), p. 17.

³ Young gives the average weight of this issue as 134 gr. (ibid., p. 19); Craig allows 135 gr. (op. cit., p. 371).

first half of the eighteenth century should reflect three factors—the number of coins of each type struck and put into circulation; that at particular periods coins were unofficially melted down to provide the raw material for the production of light-weight counterfeits; and that there were times when the coins predominantly imitated were not of the current type but of a past type. Thus the high proportion of coins of William III in the find reflects not only the large issue of 700 tons weight of these coins between 1695 and 1701 but also the fashion after 1725 for forging three-quarter-weight imitations of them.¹ Conversely the absence of first issue ('Dump') halfpennies of George I is primarily because only £6,000 worth of these were struck, and possibly also because these and the second-issue coins were melted down in large numbers by the counterfeiters to make the three-quarter-weight imitations of William III halfpence. The Montcoffer find (*Bibliography*, GD 6) deposited at the end of the eighteenth century included fifty-one George III and forty-two George II halfpennies; none of George I but seven of William III. In contrast, the find from Uckfield (*Bibliography*, GD 3), deposited after 1775—and perhaps after c. 1796 (see below, p. 154)—consisted mainly of coins of George III with 'some' of both George II and George I (types not recorded), but no earlier coins.

STAFFORD, MILL STREET. *BIBLIOGRAPHY*, GD 38

This small hoard of fifteen coins was found resting on a beam of the Old Bakehouse situated on the east corner of Mill Street and Church Lane in Stafford, when it was being demolished.² There was no container and the hoard is believed to be complete as it stands. In 1929, possibly the approximate time of the discovery, the hoard was presented by Messrs. J. & C. Mort, printers and owners of the *Staffordshire Advertiser*, to the Old Stafford Society, now the Stafford Historical and Civic Society, and it is now deposited on permanent loan to Stafford Museum and Art Gallery. It consists of the following:

ENGLISH						
No.	Reign	Denomination	Date	Type	Weight (gr.)	Diameter (mm.)
1.	William III	Shilling	1696	Kent — .	87	
		Obv. die apparently unrecorded, reading GVLIELMVS · III · DEI · GRATIA ·. Showing little traces of wear.				
2.		Halfpenny	Illeg.	3	134·5	27·4
	Very worn.					
3.	George II	Halfpenny	Illeg.	1st Issue	124·5	28
	Struck counterfeit.					
4.		Halfpenny	174—	2nd Issue, GEORGIVS type	132·5	29·1/28·7
5.		Halfpenny	175—	2nd Issue, GEORGIVS type	128·5	28·8/28·1
6.	George III	Halfpenny	1770		143·5	27·5
	Struck counterfeit.					
7.		Halfpenny	1770	Peck 893	141·5	29·7/29·3
8.		Halfpenny	1771	Peck 896	131·5	28·9/28·3
9.		Halfpenny	1772		144	28·7/28·3
	Struck counterfeit with obv. reading GEORGIUS for GEORGIVS.					
10.		Halfpenny	1773		120	28·1/27·8
	Struck counterfeit.					
11.		Halfpenny	1775		129	29·3/28·4
	Exceptionally competent (struck) counterfeit.					

¹ Craig, op. cit., p. 253.

p. 17. MS. label attached to the coins in Stafford Museum.

² *Transactions of the Old Stafford Society*, 1929,

No.	Reign	Denomination	Date	Weight (gr.)	Diameter (mm.)
12.	Uncertain	Shilling	Illeg.	50.5	

Shilling-sized disc of silver worn or as if worn completely smooth on each side and around the edge. Possibly but not certainly a counterfeit.¹

ANGLO-IRISH²

13.	George III	Halfpenny	1766	109.5	26.5
		Small underweight struck counterfeit struck on a flan too small for the dies employed.			
14.		Halfpenny	1766	130	28/27.8
		Full weight struck counterfeit from the same dies as the following coin.			
15.		Halfpenny	1766	131.5	28.2/27.7
		Full weight struck counterfeit from the same dies as the preceding coin but showing a prominent die flaw in the space before the king's nose. On the obv. of these two coins, the letters vs of GEORGIVS are small and out of line, while the spacing of vs is cramped; in addition the digits are out of line: on the rev. the E of HIBERNIA, particularly the lower horizontal stroke, is crudely engraved. They are otherwise exceptionally competent counterfeits, the reverses at least almost certainly copied from a coin from the same dies as a halfpenny in the BM collection, ex Durrant sale lot 1047.			

The find, possibly to be interpreted as a casually mislaid purse or pocketful of coins, may have been lost or concealed at any time between 1775 and 1797 and, allowing for the hypothetical disappearance from circulation of the heavy *Second Issue* coins of George III in the years immediately following 1797,³ even as late as 1800. The absence, however, of commercial tokens might suggest that a date closer to 1775 is preferable. Apart from the counterfeits and the Anglo-Irish coins, discussed separately below, the composition of this small find calls for little comment. The ratio of silver to copper coins is broadly parallel to that of the second find from Upper Dean, Bedfordshire (*Bibliography*, GC 1), which consisted of 5 *AR* and 34 *Æ* coins, of uncertain date but possibly of the eighteenth century.⁴ The only other mixed silver and copper find from England and Scotland of the second half of the eighteenth century is that from Corskie Farm, near Banff (*Bibliography*, GD 6), comprising 215 *AR* and 172 *Æ* coins. Its size and contents suggest that it is to be interpreted as a savings find, and for this reason not to be compared with the Stafford and Upper Dean finds.

There are few copper or copper and silver hoards of the period 1672–c. 1825 and our information about most of these is inadequate. It is impossible, therefore, to be categorical about the pattern of English base metal currency at this time. Contemporary printed or written sources are of importance, but these are frequently too general in their nature or too selective in their contents, in, for example, illustrating the pattern of currency in only one time and place (generally London and the Home Counties). Considerable variation in the general pattern should be expected at different periods and in

¹ On counterfeit shillings in the form of plain white-metal discs, see Craig, *op. cit.*, pp. 247–8. A practically smooth but genuine William III shilling, date uncertain, in the writer's collection, weighs 56.4 grains and thus the weight of the Stafford specimen is no argument for its being counterfeit.

² Young, *op. cit.*, p. 23, gives a weight range for this issue of 81–156 gr. The two BM specimens weigh

126.4 and 132.9 gr. (inf. from Mr. M. Dolley).

³ P. Colquhoun comments regarding the *Second Issue* coins: 'Dealers and tradesmen at present hoard up the penny pieces and only circulate the counterfeit halfpence which they receive' (*Police of the Metropolis* (6th edn., 1800), p. 186 n.).

⁴ See above, p. 147, n. 3.

different parts of the country at any one time. It must, therefore, be emphasized that the following conclusions are to be considered as provisional.

The circulation of foreign copper coins in England in the period 1672–c. 1825 would appear to have been minimal,¹ in contrast to that of foreign gold and silver coins. The presence of six seventeenth-century Scottish coins in a total of 132 coins from the find made at Haslingden, Lancs. (*Bibliography*, GA 4), deposited shortly after 1714, suggests that such coin may have had a restricted circulation in at least the northern counties of England, but further evidence is needed to confirm or qualify this. The circulation in both England and Scotland of Anglo-Irish copper coins represents a different problem; it is somewhat complicated by the presence in some finds, notably that from Stafford, of what are almost certainly locally produced counterfeits of Anglo-Irish coins, but the existence of these should presuppose the circulation of the genuine prototypes.

Significantly, Anglo-Irish copper coins have occurred in every copper or copper and silver hoard of more than ten coins deposited in England between 1672 and c. 1825 or in Scotland between 1707 and that date, of which details have been recorded. The six² finds in question are as follows:

Haslingden, Lancs. (*Bibliography*, GA 4), deposited after 1714: 15 Anglo-Irish half-pennies among the 132 coins recorded—3 of Charles II (1681, 1682, 1683); 3 of James II (1685, 1686, 1688); 9 of William and Mary (3 of 1692 and 2 each of 1693, 1694, and 1696), but curiously none of William III *solus*. The coins were probably all genuine.

Dunchurch, War. (*Bibliography* (First Addendum), GC 12), deposited after 1751: 5 Anglo-Irish halfpennies from a total of 89 coins—1 of Charles II (date illegible); 1 of George I (1723); 3 of George II (1738, 173?, 1742), of which two were counterfeit.

Stafford, Mill Street (*Bibliography*, GD 38), deposited after 1775: three of the thirteen halfpennies in the find were counterfeit Anglo-Irish coins of George III, all dated 1766 and two of them from the same dies.

Uckfield, Sussex (*Bibliography*, GD 3), deposited after 1776: an uncertain number of Anglo-Irish coins were present in this find of 749 coins but no details are given regarding their dates or whether all or any were counterfeit. It is, however, likely that the coin or coins dated 1776 in the find were Anglo-Irish, as English halfpennies were not struck in this year and there is no reason to believe that coins of any other country were present in the find. Reference in the account of the hoard to 'Welsh halfpennies' may be to Anglesey commercial tokens, but is more likely to be to the 'North Wales' or 'South Wales' class of what might be described as 'Anglo-Irish evasives', in which case the hoard is likely to have been deposited after c. 1796 (see below, p. 158).

Barvas, Isle of Lewis (*Bibliography*, GD 37), deposited after 1793: 2 of the 12 Æ coins

¹ Of the true currency hoards deposited in the eighteenth century, only that from Montcoffer (*Bibliography* GD 6) is known for certain to have included a foreign coin, in this case Dutch and dated 1720.

² Mr. M. Dolley has brought to my attention a group of three Anglo-Irish pennies of George III, dates 1769, 1781, and 1782, in the National Museum of Ireland, which are said to be from the wreck of the

'Faithful Steward' from Ireland, off Indian or Rehoboth Beach, Delaware, U.S.A., in 1785. It had silver bullion and specie on board and the loss was estimated at \$500,000 (A. L. Lonsdale and H. R. Kaplan, *A Guide to Sunken Ships in American Waters* (Arlington, Virginia, Compass Publications, 1964), p. 43. The writer is at the moment seeking further information on coin finds from this wreck.

were Anglo-Irish halfpennies—1 of George II (date illegible) and 1 counterfeit halfpenny of George III (date illegible).¹

Montcoffer (*Bibliography*, GD 6), deposited after 1796: the 172 copper coins included 7 Anglo-Irish halfpennies of George III, but their dates are not recorded, nor is it known whether all or any were counterfeit. Also present were 2 Irish commercial tokens and 1 example of the 'North Wales' class of imitative Anglo-Irish coin.

From such inadequate information few satisfactory conclusions may be drawn, save that the proportion of genuine, counterfeit, and 'evasive' Anglo-Irish halfpennies in circulation in England in the late seventeenth and almost certainly throughout the eighteenth century was substantial. It is as yet impossible to determine whether the proportion was higher in certain areas, such as the West Midlands, the North-West, and the West Coast of Scotland, or in certain periods than in others. Anglo-Irish halfpennies and farthings were struck at a lighter weight than their English contemporaries and nominally were rated at 13 to 12. They must, nevertheless, have circulated on a par with the English coins. In the words of Sir John Craig: 'Ordinary folk, if short of small change, cared nothing about either intrinsic value, high quality of copper, pattern or limits of legal tender.'² The fact that they were struck under the authority of the Crown must have helped their acceptability. Furthermore, at least at the time of striking, the genuine Anglo-Irish coins would have been as heavy as, if not heavier than, many of the older English coins of William and Mary and William III, still in circulation by the middle of the eighteenth century which by then might have lost up to a quarter of their original weight through wear; and frequently they would be heavier than the very numerous counterfeit and 'evasive' English coins concurrently in circulation. In this respect the Anglo-Irish halfpenny of Charles II in the Dunchurch find, with its counterparts in that from Haslingden, and which therefore cannot merely be dismissed as a stray, calls for separate comment. At 63 grains it is the lightest coin in that find, in weight the equivalent of a farthing, and it is demonstrably smaller in diameter than the other coins. It is probable that as these coins became smooth their size (rather than their light weight, judging from the presence in the same find of barely heavier counterfeit English halfpennies) should have led to their disappearance from circulation in England. 'Full-size' Anglo-Irish coins in contrast could theoretically circulate until they became plain blanks, and indeed after that.

The difference in weight between contemporary English and Anglo-Irish coins might in theory have been an added inducement to English counterfeiters to copy Anglo-Irish coins. But it would appear that this was a factor that did not greatly influence counterfeiters. Some of the Anglo-Irish counterfeits in the Dunchurch and Stafford finds are, making allowances for wear, either at or near the official weight for the issue, presumably because the profit made from using inferior metal was sufficient to make tampering with the weight unnecessary. Colquhoun, writing at the end of the century, refers to the counterfeit Anglo-Irish halfpennies as 'Irish Harps',³ and the fact that they constitute his

¹ I am grateful to Mr. R. B. K. Stevenson for giving me details of this find and permission to publish them here.

² Craig, *op. cit.*, p. 253.

³ P. Colquhoun, *Police of the Metropolis* (6th edn., 1800), pp. 197 and 203. J. P. Barnard classes these as 'evasives' ('The Forgery of English Copper Money in

the Eighteenth Century', *NC* 1926, p. 358) but they are straightforward counterfeits; it is the so-called 'Welsh Harps', i.e. Anglo-Irish halfpence with NORTH WALES or SOUTH WALES substituted for HIBERNIA on the rev., which as stated above, should be described as 'evasive' pieces.

third class of copper counterfeit coins then to be found in England (after the straightforward counterfeits and the 'evasives'), and that his proposals to put an end to counterfeiting copper coin includes references to Irish coin, indicates clearly that the proportion of counterfeit Anglo-Irish coins in circulation in England must have been quite high. Those in the Dunchurch and Stafford finds may, like the 'North Wales' and 'South Wales' imitative coins, have been made in England, and if so probably for the most part in the West Midlands. It is, however, conceivable that Irish 'navvies' employed in such projects as canal construction might have brought over to England quantities of copper coin that included Irish-made counterfeits, and an Irish origin for some should not be discounted.

Finally, although this is not the place for a detailed study of counterfeiting, a few comments on the English counterfeits in the two finds are necessary in view of their number and their variety. The activities of the counterfeiters were widespread at this time: as early as 1751 it was noted that 'every town and village has its mint'.¹ A statement in the *Gentleman's Magazine* in the following year to the effect that, at least in the Midlands, counterfeit halfpence were already known as 'Birmingham halfpence',² illustrates the volume of false coin already being issued from that town in particular, and possibly also from the south Staffordshire towns of Bilston, Wednesbury, and Wolverhampton, which Colquhoun cites as also centres of counterfeiting.³ It was estimated by Snelling in 1753 that between 40 per cent and 50 per cent of the current copper coin (i.e. essentially the halfpence) was counterfeit,⁴ but this and other later estimates should be treated with caution, and it seems theoretically probable that in Birmingham and the area near by, the proportion may have been higher. Later in the century the proportion of counterfeits in circulation appears to have increased. Several estimates are given by different authorities. The lowest is that given by Matthew Boulton, who wrote in 1789 that 60 per cent of the copper coin he received at toll-gates was counterfeit;⁵ as this figure may refer to one method of putting false coin into circulation, it would imply that the over-all percentage was well under that figure. In contrast, Pinkerton, writing in the same year, asserted that 98 per cent of the current copper coin was counterfeit,⁶ whilst the Mint had, on examination of samples of copper coin taken from circulation two years previously, found that only 8 per cent 'had some tolerable resemblance to the king's coin'.⁷ At the end of the century, Colquhoun gave a lower estimate of 75 per cent counterfeit,⁸ but if this figure takes into account private commercial tokens, classing them with the lawful coin, then his estimate of the proportion of counterfeit to regal coin, may be quite close to those of Pinkerton and the Mint. The proportion of counterfeits in the Dunchurch find appears, as far as may be seen, to tally tolerably well with the figure given by Snelling. In the Stafford find, the proportion of genuine halfpennies is high, but the number of coins in the sample is too small for it to be of any practical value.

While the counterfeit halfpence in the small Stafford find are all struck and, making allowances for wear, are not generally much underweight, those in the Dunchurch find are varied both in weight and method of manufacture. In Dunchurch there are cast counterfeits of halfpennies of William and Mary, William III, George I, and

¹ Cited in Craig, *op. cit.*, p. 253.

² *GM* 1752, p. 500.

³ Colquhoun, *op. cit.*, p. 180.

⁴ Snelling, *View of the Copper Coinage of England* (1766), p. 44.

⁵ Letter to Lord Hawkesbury quoted in S. Smiles, *Lives of Boulton and Watt* (1865), p. 391, n. 3.

⁶ Pinkerton, *Essay on Medals* (1789), ii, p. 85.

⁷ Cited in Craig, *op. cit.*, p. 253.

⁸ Colquhoun, *op. cit.*, p. 185.

George II: the letter published in 1752 in the *Gentleman's Magazine*¹ shows clearly that this method of counterfeiting was still commonplace in the middle of the century. Mention has already been made of the fashion among counterfeiters in the years after 1725 to manufacture three-quarter-weight cast copies of the halfpennies of William III. Of the counterfeit halfpennies of this king in the Dunchurch find well over half come into this category. The bulk of the later cast and struck counterfeits in the find fall within a similar weight range (110–20 grains) and of the remainder—including here the remaining cast counterfeit halfpence of William III—more tend to be heavier than 120 grains than to weigh less than 110 grains. The proportion of severely lightweight counterfeits is small. Three cast counterfeits come into this category; their date of manufacture is uncertain, for one hesitates to associate them directly with the three-quarter-weight counterfeits which form so distinct a class.

In this series the practice of striking counterfeit coins from forged dies became widespread later than that of manufacturing them by casting, and did not supplant it until after the middle of the century. The earliest struck halfpence in the Dunchurch find are of George I type 2, but as struck counterfeits appear to become common only from the reign of George II onwards, it seems possible that these 'early' examples may date long after their prototypes were struck. Again, very few are severely lightweight.

Two final classes of counterfeit halfpennies may be mentioned—blanks and 'evasives'. There are three examples of the former in the Dunchurch find, all, significantly, weighing between 110 and 120 grains, while the extremely worn shilling in the Stafford find is possibly to be regarded as a counterfeit blank 'shilling'. As counterfeits they can be regarded in two ways—as imitations of coins in an extremely worn state, which would certainly be a likely explanation for the Stafford shilling, or as proper unofficial blanks, originally intended to be struck with the design of one of the current halfpennies, but without this having taken place. In theory blank counterfeits should only circulate after a sufficient proportion of the current copper coins were themselves worn practically smooth, as with the William and Mary and William III halfpennies in the Dunchurch find, and thus it is likely that blanks began to be produced only fairly late in the first half of the eighteenth century. The Mint's estimate in 1787 that 12 per cent of the coins passing as halfpennies were blank² would suggest, logically enough, that this class of counterfeit became more common in the second half of the century, but this figure may include early genuine coins and possibly old counterfeits which by that date had become smooth through wear.

It has been said that the production of 'evasive' English counterfeits began in 1751, and thus their absence from the Dunchurch find would imply, since the find is large enough for their absence to be significant, that a date for its deposit either in or very shortly after that year is likely. The source for this assertion, which was first proposed by Barnard³ and was accepted by Peck⁴ with only a little caution, is the letter published in the *Gentleman's Magazine* in 1752. In the present writer's opinion this letter does not refer to the beginning of the production of 'evasives': the 'new edition' to which the writer of the letter alludes appears rather to refer firstly to the resumption of the activities

¹ *GM* 1752, p. 500.

² Cited in Craig, *op. cit.*, p. 253.

³ J. P. Barnard, 'The Forgery of English Copper

Money in the Eighteenth Century', *NC* 1926, p. 341.

⁴ Peck, *op. cit.*, p. 206.

of the Birmingham counterfeiters after a temporary suppression of their activities in the previous year, and secondly to the fact that whereas previously they had cast counterfeit coins, now they were striking them. Peck italicizes the phrases in the letter 'variety of impressions' and 'all distinguishable from each other and from the genuine halfpence', but these might equally refer to straightforward counterfeits as to the 'evasives', indicating that the styles of the different counterfeiters were quite distinct from each other and from that of the official coinage, and not implying that it was their subject-matter that was different. In a paper read in 1957 Dr. J. P. C. Kent proposed that the issue of the 'evasive' halfpence and farthings was probably confined within the years 1796-8,¹ and although the present writer would be inclined to extend the later figure to *c.* 1800 in view of Colquhoun's comments about the Second Issue coins,² the arguments for a starting date of 1796 are most convincing.

ACKNOWLEDGEMENTS

The writer is indebted to Mr. A. H. Gunstone of the City Museum and Art Gallery, Birmingham, for permission to publish here the find from Dunchurch, and to Miss M. M. Archibald for very kindly making available her notes on the find; also to the Stafford Historical and Civic Society for permission to publish the Stafford, Mill Street find. Mr. M. Dolley made several helpful suggestions for improving the text.

¹ J. P. C. Kent, 'Forgery in the reign of George III —The problem of medley halfpence', paper given to the British Numismatic Society on 22 May 1957.

I am grateful to Dr. Kent for permission to refer to his unpublished paper.

² See above, pp. 155-6.

JOHN BOXER AND THE NINETEENTH-CENTURY SILVER TOKENS OF KENT

R. H. THOMPSON

IN the standard catalogues by Davis¹ and Dalton² the only token of the early nineteenth century allocated to the county of Kent is a silver shilling naming John Boxer, Folkestone. The main purpose of this paper is to attribute to Kent two pieces from the main series of currency tokens of the second decade of that century, and to examine the position of a local token issuer; it does not seek to assemble all the nineteenth-century tickets, checks, or whatever which belong to Kent. At all stages of preparation it has benefited from the close attention and friendly criticism of Mr. John Brand, who has also lent tokens for illustrating and recording (JDB), and has consulted on my behalf the Curator of the Maidstone Museum, Mr. L. R. A. Grove, whose assistance also I acknowledge with gratitude.³



FIG. 1.

It will, however, be convenient to begin with a new silver token that came to light in the Cokayne sale of 1946, the catalogue of which may be rather inaccessible.⁴ The present whereabouts of the piece does not seem to be known, but fortunately Messrs. Glendining illustrated it in collotype, and through the courtesy of Mr. French it is possible to reproduce it here (Fig. 1).⁵ The dies may be described as follows, distinguished for present purposes by letter or number:

Obv. A: INVICTA (the motto of Kent) below a horse rampant within a shield (the ancient arms of Kent).

Rev. 1: KENT / TOKEN / VALUE / 12 PENCE / within wreath.

¹ W. J. Davis, *The Nineteenth Century Token Coinage* . . ., 1904. Reprinted 1969, with 'Addenda' compiled by P. Frank Purvey.

² R. Dalton, *The Silver Token-Coinage mainly issued between 1811 and 1812, described and illustrated; with introduction [by A. W. Waters]*, 1922. Reprinted 1968.

³ A version of the following was read at the National Numismatic Congress held in Margate in April 1972,

and ably reported in *Coins*, vol. 9 (no. 7), July 1972, pp. 33-4, by its retiring editor, Miss Heather Salter.

⁴ Glendining & Co. Ltd., *Catalogue of the important sale of Tokens formed by the late Francis Cokayne, Esq., 1st portion . . . 17th July 1946 and following day*, lot 251, plate X; cf. *BNJ* xxv (ii) 1947, p. 239.

⁵ For the illustrations I am indebted to the expert photography of Mr. Ray Gardner of the Department of Coins and Medals, British Museum.

That the authenticity of the piece was not in doubt is indicated by the price paid, £16. 10s. Its rarity, however, suggests that there was never a substantial production of this type which was brought to the point of issue.

The details of the Kent token that has long been known (Davis 1, Dalton 1) are these:

Obv. B: JOHN BOXER FOLKESTONE / 1811 / CINQ-PORT-TOKEN on a scroll below the arms of the Cinque Ports, crowned.

Rev. 2: ONE / SHILLING / VALUE / within wreath. *Edge:* Obliquely grained.

Weight: BM, ex Frampton, 3.94 g. (60.8 gr.), ex Sarah Sophia Banks, 4.27 g. (65.9 gr.); JDB, 4.25 g. (65.6 gr.); RHT, 4.45 g. (68.6 gr.); DVG, 60 and 65 gr.

Die-axis: In these six cases, upright.



FIG. 2.

Reverses of the nineteenth-century tokens are often unremarkable. It is perhaps not surprising, therefore, that cataloguers have paid more attention to the obverse when allocating tokens to counties, and that it has not apparently been remarked before that a token placed in Dorset (Davis 12–13, Dalton 15–16, in silver and brass respectively) is from the same reverse die as Boxer's Cinque Port token (see Fig. 2). Distinctive features which leave the identity in no doubt are the disproportionately large E and G, the V punched in too low, and the stroke at the foot of the U. The coin may be described as follows:

Obv. C: COMMERCIAL TOKEN I·B·X·R / 1811 / bust to left.

Rev. 2: as above. *Edge:* Obliquely grained.

Weight: RHT (in silver), 4.60 g. (71 gr.); DGV (in silver), 68 and 73 gr.

Die-axis: BM (in brass), RHT, DGV (in silver), upright; JDB (in brass), inverted.

On the specimens seen, cracks near the bottom of the wreath on the reverse die occur with obverse C in silver only, and suggest the order of striking B2, C2 in brass, C2 in silver.

This die-link, however, is only one amongst many (see Fig. 3). On Dalton Dorset 17 (Davis —), which was also present in the Cokayne sale, obverse C is combined with:

Die E: *ENGLAND·IRELAND·SCOTLAND & WALES. / LET COMMERCE FLOURISH / figure seated to right.

which also occurs on a Middlesex token (Davis 14–15, Dalton 15–16, in silver and copper respectively) with:

Die 4: LONDON TOKEN / ONE / SHILLING / PAYABLE / AT / S. LLOYD'S / BUCKLESBURY / 1811

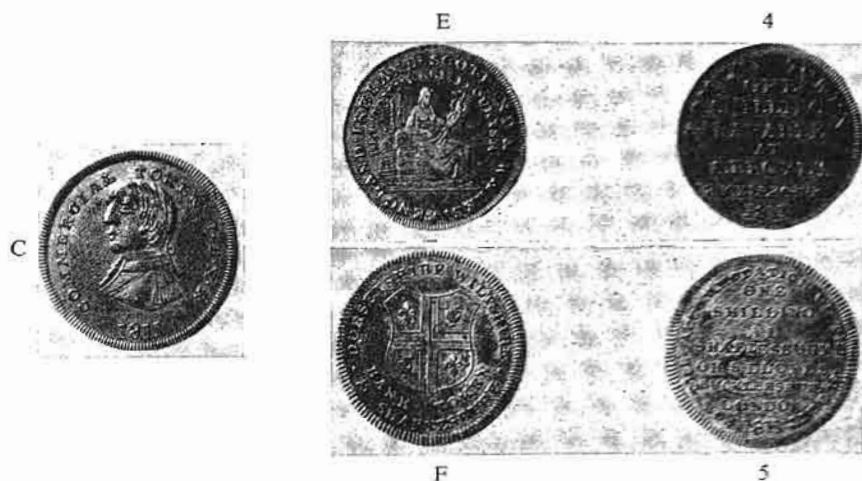


FIG. 3.

Furthermore, Davis Dorset 12 and 13, said to bear a 'naval' bust, are from the same die C as Davis Dorset 11 (Dalton 14), on which the bust is described as 'military'—although Davis does, inconsistently, query whether the 'military' bust might be Nelson's. This latter piece combines obverse C with:

Die F: 'DORSETSHIRE WILTSHIRE' / & SHAFTESBURY / BANK TOKEN / arms of Shaftesbury.

which further pairs with this Dorset die (Davis 10, Dalton 13):

Die 5: FOR THE ACCOMMODATION OF THE PUBLIC / ONE / SHILLING / AT / SHAFTESBURY / OR S. LLOYDS / BUCKLESBURY / LONDON / 1811

There is a tendency to regard such complexes of linked dies as thoroughly bad, and every coin as damned by the mere fact of die-linking. The probability, however, is that any fraud was practised in the factory where a number of genuine issues were struck—the factory in this case, if Davis is right to attribute his Kent 1, Dorset 10–11, and Middlesex 14–15 to Thomas Halliday, being presumably either (Sir) Edward Thomason's premises in Birmingham, or Halliday's own. Indeed, both Davis (p. 71) and Waters¹

¹ Arthur W. Waters, *Notes on the Silver Tokens of the Nineteenth Century*, 1957, p. 8.

have found independent evidence of the existence of an S. Lloyd at the right place and time (though not of his connection with the Shaftesbury Bank), and the latter is surely correct to consider genuine issues Dalton Dorset 13 (Davis 10; F5) and Middlesex 15 (Davis 14; E4).

Die F, with the arms, one would prefer to consider an obverse, die 5 therefore, and by analogy die 4, reverses, and therefore die E another obverse. In consequence, the coins CE and CF look suspiciously like obverse mules.¹ Both, in any case, are very rare; and they are finally condemned by the fact that they are known only in brass. They were not genuine issues, therefore, but artificial productions, struck perhaps as trial pieces, perhaps as *pièces de plaisir*. In the same category may be placed C2 in brass,² E4 in copper, and the uniface striking of obverse C in brass (Dalton Dorset 18).

Once CE and CF are seen to be concoctions, obverse C with the bust of Nelson (?) has no real connection with Dorset. Instead it should be associated with obverse B through their common reverse. When this is done, the 'cabbalistic' letters I.B.X.R., which Waters could not explain (p. 4), are readily interpreted as the name J. Boxer reduced to its consonants (a common enough device). The pseudonymity of the die may, it is true, give cause for concern, especially in view of the contemporary fabrication of tokens by muling dies of different issues, and the production of fraudulent tokens with altered names to undermine genuine issues. Yet obverse C has no separate reverse with which it was struck in silver, and would therefore appear to have been sunk purposely to pair with reverse 2; and it is not only die-linked but also connected by its legend with obverse B, which nevertheless it does not imitate. On balance—given a John Boxer in Folkestone at the appropriate time, and of this evidence will appear—one concludes that C2 was a genuine issue. Why Boxer should have ordered at about the same time an explicit Cinque Port token and a pseudonymous Commercial token is difficult to understand; one can think of possible explanations, but in the present state of knowledge they can only be speculative.



FIG. 4.

A potential difficulty in so attributing C2 is the sixpence classified by Davis as Not Local 9, by Dalton as Not Local 14 (Fig. 4). This also bears a rather crude bust (Wellington?),³ part of the same obverse legend, and initials which could likewise stand

¹ Pace Peter A. Clayton on p. 42 of his 'Henry Morgan, Token Manufacturer of Rathbone Place', in *Cunobelin*, no. 13, 1967, pp. 36-45, plate IV.

² The two brass specimens seen show no signs of having been silvered.

³ The profile seems to be that of 'Nosey', and he

would fit well with Nelson (who does appear a likely identification of the bust on obverse C). Although it is hardly essential to show that he was honoured in any specific locality, it is not irrelevant to note also that Wellington was (briefly) M.P. for Rye in 1806, and Lord Warden of the Cinque Ports from 1829.

for John Boxer, further abbreviated for the smaller size. It may formally be described thus:

Obv. D: COMMERCIAL-TOKEN / bust right.¹

Rev. 3: SIXPENCE / 1811 between two branches of olive (?) / 1 B in swash capitals divided by a rose and shamrock intertwined. *Edge:* Obliquely grained.

Weight: JDB, 2.17 g. (33.5 gr.); RHT, 1.90, 2.02, and 2.27 g. (29.3, 31.2, 35 gr.).

Die-axis: JDB, RHT (2), DGV, upright; CAJ (now BM), RHT (1), 20°.

This sixpence and the shilling C2 might very well seem companion pieces; and so, indeed, they were originally catalogued by Boyne, under the heading 'Without Names' (244, 245).² Unfortunately, he added the note 'of inferior workmanship; probably they were issued in Ireland'. Davis transferred the shilling to Dorset (though he made Boyne comment still on two previous tokens), but on the sixpence he added to Boyne's surmise the suggestion that the initials might stand for the Irish Bullion Company, whose cipher appears on certain Dublin tokens (Davis and Dalton 4-7). In 1968 it was reiterated that D3 was 'probably Irish';³ and by 1970 this had hardened into the assertion that its locality was 'almost certainly Dublin'.⁴

The types, however, bear no resemblance to those of the Irish Bullion Company, and the initials are not 1 B Co but 1 B. If it bears a shamrock, it likewise bears a rose, and could have been described with equal justification, for all its typological evidence, as 'probably English'. Had the piece circulated in Ireland, one could expect that some specimens, and some knowledge of the fact, would have been retained in that island; yet the essentially nineteenth-century collection of the Royal Irish Academy contained no specimen,⁵ and Aquilla Smith (1806-90), writing only forty years after the silver tokens were outlawed, did not include it among the Irish tokens.⁶ If the shamrock, inferior workmanship, and the 1 B constitute the sum of the evidence for an Irish attribution (and no more has been offered), it is patently insufficient.

The correct attribution of the sixpence D3 is apparent from the provenance of a specimen, the obverse of which is illustrated in Fig. 4. It was found in Folkestone itself, some years before 1971, and sold to Mr. C. A. Jennings (the energetic organizer of the Margate Congress) 'together with a number of inconsequential pieces of Geo. III etc., by a demolition worker in the Foord Road area' (Foord Road being a continuation of Grace Hill, which was formerly called Rendezvous Street). It is pierced, the piercing having broken through to the edge and so perhaps occasioned its loss, but there is no reason why this should affect its value as evidence of locality; if anything the contrary, for such a piece is less likely to have been brought into Folkestone by (or for) a collector.

¹ Between T and O, O and K, K and E, appear small, irregularly shaped pellets, two of which have been read as stops. Clearly, however, intrusive, they are perhaps to be connected with the signs that the O of TOKEN was punched over an I.

² William Boyne, *The Silver Tokens of Great Britain and Ireland, the Dependencies and Colonies . . .*, 1866. The British Museum specimen of C2 in brass remains in the Non-Local section of the trays.

³ B. A. Seaby Ltd., *Valuation Sheet to 'The Silver Token Coinage 1811-1812' by Richard Dalton*, 1968, note 17.

⁴ Peter Seaby and Monica Bussell, *British Tokens*

and their Values, 1970, p. 169. Curiously, the piece receives no mention in *Seaby's Standard Catalogue, part 3: Coins and Tokens of Ireland*, compiled by Peter Seaby, 1970.

⁵ R. A. S. Macalister, 'A Catalogue of the Irish Traders' Tokens in the Collection of the Royal Irish Academy', in *Proceedings of the Royal Irish Academy*, section C, vol. 40 (no. 2), Dec. 1931, pp. 19-185. Davis's 'Not Local' are covered on pp. 142-3.

⁶ Aquilla Smith, 'Catalogue of Silver Tokens issued in Ireland', in *Proceedings and Transactions of the Kilkenny and South-East of Ireland Archaeological Society*, vol. 3 (part 2), 1855, pp. 364-8.

It was on seeing the note in Seaby's *British Tokens and their Values* that it occurred to Mr. Jennings that the letters IB might stand for John Boxer, and he brought his evidence to the 1971 National Numismatic Congress in Birmingham. It is commendable that he has since permitted his important find-specimen to be presented to the British Museum (where there was no example).

With the Irish attribution set aside, and with the find in Folkestone, one must conclude that the Commercial sixpence, so far from being a difficulty in the attribution of the Commercial shilling, should accompany it into Kent. Both are genuine issues of John Boxer of Folkestone; for, as already indicated, there is ample evidence of the existence of a man of that name. Indeed, the evidence is so suggestive for the character of a token issuer that it will be given at some length.¹

There was more than one tradesman in Folkestone around the turn of the century who bore the name John Boxer, the *Universal British Directory* of 1798 recording a butcher and a haberdasher. Neither, however, appears subsequently,² unless one was the John Boxer appointed postmaster on his marriage in 1803 to Mrs. Elizabeth Toes, the then postmistress.³ This man does not appear to have been active later than March 1810, when the appointment of George Stone as postmaster was cancelled after an anonymous letter had drawn attention to a trial and conviction of the latter in 1798.⁴ This leaves one obvious candidate for the token issuer of 1811.

John Boxer, son of Michael and Ann, was baptized on 29 August 1779. His father, probably the Michael Boxer admitted a freeman by birthright in 1778, and buried in December 1810,⁵ was a watchmaker, and the son followed the same trade. On 3 August 1803 John Boxer aged 24, watchmaker, of St. Martin in the Fields, Middlesex, married in Folkestone Ann Sandford aged 23, of the same town;⁶ and a year later John Boxer, watchmaker, of Long Acre, London, the son of Michael Boxer, was sworn a freeman of Folkestone.⁷ From February 1805 the name occurs in the Poor Rate books at Butcher, or Butchery, Row, and there he remained for nearly half a century, the Row being incorporated into Rendezvous Street in the eighteen-thirties.⁸

Throughout his life the token issuer described himself as watch (or watch and clock) maker, though the state of the trade was evidently not sufficient to keep his energies fully

¹ Except for the books on horology, the directories by Pigot and Bagshaw, and the *New Guide* of [1848?], the following six paragraphs derive from a visit to the Folkestone Reference Library, where Mr. C. P. Davies readily made available to me the file of information on the Boxers that he has gathered over the years, the volumes of photocopied extracts from a full set of directories covering Folkestone, and even an incidental reference in a cutting relating to another subject. He has been happy for me to publish the information, and the token-issuer is consequently much better documented than otherwise I could have hoped. I am very grateful to Mr. Davies.

² W. Finch, *An Historical Sketch of the County of Kent . . . with a Directory*, 1803; the *Maritime Imperial Guide* [c. 1807].

³ Postmaster-General, *Minutes*, vol. 22, no. 214D; I am indebted to Post Office Records for permission to use this information. The postmaster of 1803–?10 is more likely to have been the haberdasher than the

butcher, particularly since Richard Toes had been a linen-draper. (The postmaster appointed in 1842 was also a draper.) The senior John Boxer was, however, a watchmaker, according to a letter from Post Office Records to the Borough Librarian of Folkestone on 14 February 1966, but not according to the accompanying extracts to which it refers; in 1972 Post Office Records was unable to throw any light on this discrepancy.

⁴ Postmaster-General, *Minutes*, vol. 25, no. 405G.

⁵ Folkestone, *Common Assembly Minute Book*, 23 Nov. 1778 (p. 38); and extracts from the registers collected in the Boxer file.

⁶ A. J. Willis, *Canterbury Marriage Licences 1781–1809*, 1969, p. 269.

⁷ *Common Assembly Minute Book*, 28 Aug. 1804 (p. 190).

⁸ Alternative descriptions were Church Street, Church Hill Street, and 'near the Market'.

employed. By 1790, if not earlier, complete movements could be ordered from 'garret-masters' in London, Birmingham,¹ and elsewhere, the local maker fitting the dial and the case, etc.; and in the course of the nineteenth century the 'maker' became no more than a repairer and a dealer in timepieces which might nevertheless bear his name.² Long-case clocks signed by Boxer (but apparently no watches) do indeed survive, one with *Jⁿ Boxer Folkstone* [sic] on the dial being actually in the Folkestone Reference Library. He may have been more than a dealer and repairer, however. Michael Boxer is numbered among the true craftsmen,³ and John was presumably in Long Acre to serve his apprenticeship. A former school-fellow of his son remembered 'Mr. John Boxer, the well-known "grand-father" clock maker . . . we were in the habit of surreptitiously trying our hands at the lathe in Mr. Boxer's workshop'.⁴ He probably did not make his own dial-plate, springs, wheels, etc., but may have been a finisher: one who 'finishes or puts together the different constituent parts of a clock when made, and who has his profit from the sale of the machine'.⁵

The profits, however, apparently did not satisfy him. On 26 March 1810, after the cancellation of George Stone's appointment, 'John Boxer, Junior, Watchmaker' was appointed postmaster 'in the place of Mr. Boxer'.⁶ For thirty-two years he remained postmaster, a job that was not undemanding, for the mail was dispatched to Hythe and Romney, and arrived from London, at half-past seven in the morning, and returned from Hythe and Romney, and was dispatched to London, at half-past six in the evening.⁷ By 1832 the coaches had lengthened the post office day to seven in the morning and half-past eight at night.⁸ Eventually, however, in spite of all his potential sources of income, Boxer got into difficulties, and in 1842 he was dismissed as postmaster for being in arrears.⁹ The time was twice extended for him to repay his debt, which he finally discharged in 1844.¹⁰

Boxer's activities were far from exhausted by the post office. He is listed in directories not only as watchmaker '& fancy repository',¹¹ but also as agent for the Norwich Fire & Life Office,¹² as stationer (and preserved in the Boxer file in the Folkestone Reference Library is an 1832 receipt for stationery, signed 'J Boxer'), subscription reading rooms, etc.,¹³ as auctioneer and appraiser, and stamp distributor.¹⁴ His wife, moreover, may have been the Ann Boxer listed as a confectioner.¹⁵ In 1823 'Boxer, Folkestone' was one of the three publishers of *The Sandgate, Hythe and Folkestone Guide . . . to which is subjoined a brief history of the Cinque-Ports*. On p. 108 of that work

¹ It will be remembered that the tokens give a probable connection with Birmingham. A London connection has already appeared.

² Iorwerth C. Peate, *Clock and Watch Makers in Wales*, 2nd edn., 1960, pp. 24-5; H. Miles Brown, *Cornish Clocks and Clockmakers*, 2nd edn., 1970, pp. 20-1.

³ G. H. Baillie, *Watchmakers and Clockmakers of the World*, 3rd edn., 1951, p. 36.

⁴ 'An Old Folkestoner', letter in unidentified newspaper, 11 Oct. 1896, a cutting of which is kept in the Folkestone Reference Library under 'Folkestone Miscellanea'.

⁵ Abraham Rees, *Cyclopaedia, or a New Universal Dictionary of Arts and Sciences*, 1802-20, s.v. 'Clock-maker'.

⁶ *Postmasters' appointments and bonds, 1787-1849*;

the penalty of his bond was £400. What the relationship was between the two John Boxers has not been ascertained.

⁷ Pigot and Co's *London & Provincial New Commercial Directory for 1823-4* . . . [2nd edn., 1823]. Their 1822-3 directory does not cover Kent.

⁸ Id., *National London & Provincial Commercial Directory for 1832-3-4* . . . 5th edn., [1832].

⁹ Postmaster-General, *Minutes*, vol. 66, no. 2306. See further, addendum 2.

¹⁰ Id., *Minutes*, general index.

¹¹ Pigot, 1823-4.

¹² Id., 1823-4; 1826-7; 1832-3-4; and their *Royal National and Commercial Directory and Topography* . . . [1839].

¹³ Id., 1832-3-4.

¹⁴ Id., 1823-4, and perhaps others.

¹⁵ Id., 1839.

(and of the 1816 *Hythe, Sandgate and Folkstone Guide*) 'the other [library], on a smaller scale, at the corner of Rendezvous-street' may have been Boxer's, which was afterwards described more fully: 'The Library and Reading Rooms are conducted by Mr. Boxer; and although the library department is not a very diffuse one, yet it is, probably, adequate to the demand. The morning, evening, and provincial papers are here to be met with; likewise various articles of utility and fancy'.¹

After the withdrawal of the postmastership, however, this Folkestone factotum was reduced for a few years to describing himself merely as watch and clock maker;² and one suspects it was in some desperation that in his old age he added 'house and general agent',³ and 'auctioneer'.⁴ Indeed, Folkestone as a whole did not flourish in the first half of the century: 'It had, in 1811, upwards of 500 houses, and a population of about 4,000 souls, which number has scarcely at all increased to the present time [after 1829]; probably from the commerce of the town being at a very low ebb'.⁵ Boxer's spring was at last unwound at the age of 73, his interment in the parish churchyard being registered on 13 August 1852. He is not known to have had any memorial, nor to have left a will. At some stage he might have remarried, for his wife is recorded in the 1851 census as Ann Susan Boxer aged 60—or was she so modest about her age as to understate it by ten years?

Waters (p. 6) designated Boxer's Cinque Port shilling a 'genuine trader's token' and noted only that his name occurred as a watchmaker ('W. Boxer' being a misprint). Although it is possible to point to other watchmakers who issued silver tokens,⁶ there are indications that several were not issuers by virtue of their watchmaking, and it certainly does not strike one as a trade that would itself generate a pressing need for small change. Its significance would appear rather that it was, for craftsmen who had served an apprenticeship, a depressed trade, undermined by the batch production of its 'dishonourable' branch. One may see Boxer as a skilled tradesman, driven by economic pressures into other lines of business in order to maintain an independent livelihood.

His remittance activities were surely of much greater significance than his trade in respect of his issuing of tokens. As postmaster, and subsequently as stamp distributor, and insurance agent, Boxer was a collector of moneys, which would have made him a source of small change at least, and in some respects the local banker.⁷ There were indeed other silver tokens put forth by postmasters, from stamp offices, and by insurance agents.⁸ Furthermore, with the post office (and later the stamp office) he was one of the leading figures of the district. The latter would involve him in a variety of legal, financial, and commercial transactions, and with the former he received and dispatched letters

¹ *The Watering Places of Great Britain, and Fashionable Directory* . . . (London: Isaac Taylor Hinton), part 7, MDCCCXXXI—part 9, MDCCCXXXII, p. 154.

² Kelly's *Post Office Directory of the Six Home Counties* . . ., [1845]; Samuel Bagshaw, *History, Gazetteer and Directory of the County of Kent* . . ., [1847], vol. 2, p. 439.

³ Williams's *South-Eastern Coast Directory*, 1849.

⁴ Kelly's *Post Office London Directory*, 1851.

⁵ *A New Guide to Sandgate, Folkstone* [sic], *Hythe, &c.* . . ., [1848?], p. 60.

⁶ Davis, Dorset 2; Dorset 4–7 (also a silversmith);

Hampshire 27; Norfolk 6 (with a shoemaker cum grocer cum draper); Yorkshire 55, countermark 49; Yorkshire 57–74 (also goldsmiths/jewellers).

⁷ Cf. L. S. Pressnell, *Country Banking in the Industrial Revolution*, 1956, on the origins of country bankers: revenue collection (pp. 56–74); insurance (pp. 55–6).

⁸ Davis, Cornwall 8–9 (postmaster); Durham 1–2, see Waters, p. 4 (insurance agents, stamp office); Lincolnshire 11, see Waters, p. 7 (insurance agent); Norfolk 8–11 (stamp office); Nottinghamshire 1 (postmaster); Suffolk 7 (stamp office).

over a wide area, specified in 1832 as London via Dover, and Brighton, Bromley, 'Cranbrooke', Hastings, Hythe, Lamberhurst, Lewes, Romney, Rye, 'Seven Oaks', Tenterden, and 'Tonbridge Wells'.¹ It will be noticed that four of the Cinque Ports are served, and also the associated Ancient Town of Rye. One may readily see John Boxer, therefore, as the sort of person to whom others would look, or who might take it upon himself, to meet a widespread dearth in the Cinque Ports, or of commerce more generally.²

It is suggestive also that he fulfilled at least three functions—post office, stamp office, and library—which afterwards were taken over by full-time officials of central or local government. At the same time it is true that on the grounds of *cui bono*, he must be under suspicion as the sender of the anonymous letter of 1810—although this might not be to the writer's discredit were the crime known of which George Stone was convicted—and the considerations of personal advantage that may have led him to that act may have prompted his token issue also. The evidence is insufficient to decide whether Boxer was a man who would have seized upon token-issuing as an opportunity to profit from public want, the abuses of which compelled government to step in, or whether he was one who was more sensitive and responsive than government to local needs, and whose initiative and practical measures among others' shamed it into carrying out its duty.

In conclusion, the early nineteenth-century tokens of Kent may be set out as they now stand if the arguments of this paper are accepted.

		<i>Davis</i>	<i>Dalton</i>
A1	Æ County shilling <i>Folkestone; Boxer, John (1779–1852), watchmaker, postmaster, etc.</i>	..	..
B2	Æ Cinque Port shilling 1811	Kent 1	Kent 1
C2	Æ Commercial shilling 1811	Dorset 12	Dorset 15
D3	Æ Commercial sixpence 1811	Not local 9	Not local 14

ADDENDA

1. Mr. D. G. Vorley of Sandgate, Folkestone, has kindly supplied details of specimens in his collection. It is possible to insert them all at their appropriate positions (DGV), except the weight of his sixpence, D3, which is 34 gr.

2. At just about the time that Boxer must have been dismissed, the following 'observations well worthy of public attention respecting the causes which have assisted to produce so much irregularity and fraud' appeared in *The Kentish Observer*, 7 April 1842, under the heading 'The Salaries of Postmasters and their Clerks': 'although the Post-office is generally acknowledged to be a department of great trust and temptation, . . . the [annual] salaries of 552 . . . postmasters only average £49 10s. each, although they have to provide their own offices, and to defray all the expenses incidental thereto'.

¹ Pigot, 1832–3–4.

² An inheritance of money just at the appropriate time from his father and perhaps from John Boxer

senior might have been a factor in enabling him to finance the striking of tokens.

CALCULATING BRITAIN'S REQUIREMENT FOR DECIMAL COINS

A. J. DOWLING

AMONG the problems involved in Britain's changeover to decimal currency was the estimation of the number of new coins likely to be required at and immediately after 'D' Day. It was accepted at a very early stage that a rapid changeover to decimal reckoning would be the most convenient from the public's point of view and that it should be the aim of the Royal Mint that the changeover should on no account be impeded by a lack of coin.

It was also clear from the outset that the pace of the changeover would be governed mainly by the rate of conversion of shops' cash registers and that it would far outstrip the Mint's day-to-day production capability. A substantial stockpile had therefore to be envisaged and it was essential that this should be big enough to meet the public's need, but for obvious reasons of economy, not too big.

Past experience offered very little to go on. Nothing relevant had occurred before in the British coinage and though the decimalization of the South African, Australian, and New Zealand currencies was studied, the circumstances were so different as to render their coinage experience of little practical value. On the other hand, important lessons were contained in their experience of decimalization problems generally, and it was to be expected that Britain's changeover would therefore be relatively much more rapid.

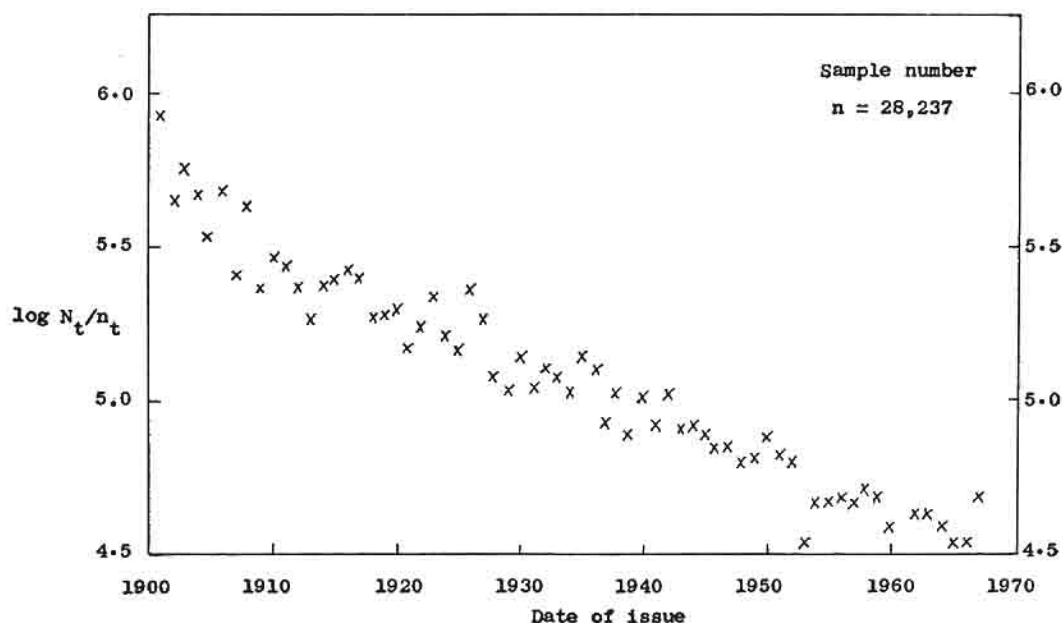
CIRCULATION OF THE OLD COINAGE

The obvious first step in the calculations was to obtain as precise an estimate as possible of the number of coins in circulation. Records naturally existed of issues and withdrawals, but these did not tell the whole story because of the tendency for coins to be lost, exported, or placed in permanent collections.

The practice of dating coins according to their year of minting, which for practical purposes in Britain can usually be taken also as the year of issue, provided a means of estimating this wastage. Bulk samples taken from circulation were examined and the frequency with which coins of particular dates were found in the samples were compared with the number of coins of those dates originally issued. From the fact that the earlier the date of issue the fewer coins were found in the sample it was possible to deduce annual rates of wastage. Although simple in principle, the method was not altogether easy to apply in practice. Early trials showed that newer coins tend to be concentrated in cities with correspondingly higher concentrations of older coins in country areas. Thus the methods of sampling had to be devised with great care to ensure that the samples examined were faithfully representative of the circulation as a whole.

These sampling problems were satisfactorily overcome and remarkably even wastage rates were revealed for most of the denominations. An example is illustrated in graphical form in Table I. The wastage rates varied from denomination to denomination between

TABLE I

*Sample of halfpennies in the 1968 survey*Plot of $\log N_t/n_t$ versus date of issue N_t = Number of coins originally issued in year t . n_t = Number of coins of that date found in sample.

about 0.4 per cent per annum to nearly 4 per cent and not surprisingly the rates tended to be highest among the lowest denominations.

It was concluded that the total circulation inferred by this method was probably accurate to within plus or minus 3 per cent. However, the method threw no light on how much of the coin was in active use and how much was largely idle in some form of savings reservoir. On the evidence, for example, of the towers of pennies that used to be seen on bar counters and of the popular pastime of collecting sixpences in whisky bottles, it was suspected that the savings element was quite large. The distinction between active and inactive was important since the latter would clearly not need to be replaced quickly and could accordingly be largely excluded from the stockpile. The next objective therefore was to try to determine the use to which the coins in circulation were being put. This was done by means of a market survey.

MARKET SURVEY

The survey was undertaken by a private firm experienced in the field of market research. Interviewers were sent to representative samples of every type of coin user that could be thought of. The contents of shop tills and of pockets and purses were counted and the rate of flow of coins between different users was measured.

The whereabouts of the coin as illustrated by the survey is shown in some detail in Table II. Briefly, it appeared that out of the total inferred circulation, some 21 per cent was held on average as working stock by the banks, some 15 per cent was in coin boxes of meters and coin vending machines, 27 per cent was in shop tills, pockets and purses, etc. (later called 'Transaction Coins') and 13 per cent was held in savings

TABLE II
Estimated coin circulation—Autumn 1968

millions of coins								
	$\frac{1}{2}$ d	1d	3d	6d	1s	2s	2s6d	TOTAL
Bank stocks	93	281	163	412	367	185	119	1620
Transaction coins	(250)	(660)	(254)	(392)	(131)	(206)	(193)	(2086)
Shops & post offices	102	203	102	122	48	59	57	693
Public transport	8	31	14	22	2	3	2	82
Other businesses	3	116	15	64	11	38	30	277
Miscellaneous	15	46	17	27	6	20	19	150
People - pockets & purses	92	180	50	95	28	70	72	587
Homes - petty cash	30	84	56	62	36	16	13	297
Homes - savings	147	458	125	287	18	8	8	1051
Machine coins	19	159	18	363	402	170	33	1164
Total from survey	509	1558	560	1454	918	569	353	5921
Total inferred from date study	980	2041	860	1853	977	647	408	7766

reservoirs of various kinds. A further 24 per cent was unaccounted for. This discrepancy led to a lot of discussion as it seemed to suggest that some significant users of coin had been omitted from the survey or that the sampling was unrepresentative. However, no such errors could be found and it seemed reasonable to assume that most of the missing coins were in fact in private homes. The market researchers stated that people are invariably shy about answering money questions, and it seemed more than likely that many would have understated the extent of their savings and that others were actually unaware of the numbers of coins lying about in their homes. This belief was supported by the fact that the proportion of missing coins was largest among those denominations which formed the bulk of home savings.

Thus it appeared that out of every 10 coins nominally in circulation roughly 4 were kept as savings, 4 were in shop tills, pockets, purses, or machine reservoirs, and the remaining 2 were held by banks as working stock.

The survey also showed clearly that the great bulk of the new coins could be expected to reach the general public through change received in shops. Very little on the other hand would reach them through their pay packets, and in contrast with shops, where some 80 per cent of transactions were found to involve change-giving, it was observed that most people tendered exact fares on buses and other forms of public transport. Thus the pattern of circulation that emerged was from the banks to shops, from shops to the public, from the public to transport authorities and vending machines, and from the latter back to the banks. A significant proportion of low denomination coin suffered a check in circulation by being temporarily retained by the public in the form of small savings. On average these were shown to accumulate over a period of about a year before being released back into the general flow.

This circulation pattern is illustrated in more detail in Table III.

TRANSLATING THE £SD CIRCULATION INTO DECIMALS

For each of the four main categories of coins distinguished by the survey the translation into decimal denominations was carried out in a different way and the extent to which the estimated requirement might be needed by 'D' Day was also assessed separately. It was decided to provide for bank stocks in the same ratio to transaction and machine coin as existed in the £sd system, and to provide all this stock, like the transaction and machine coins, by 'D' Day.

The translation into decimals of the machine requirement was based on the information revealed by the survey on coin-operated machines and meters and on the known plans for their conversion.

Since the survey had shown that savings generally accumulated over a period of about a year it was clearly not necessary to make substantial provision for them in the stockpile. The rate of build-up could easily be matched from the Mint's current production capacity. To allow for some initial curiosity hoarding, however, it was decided to include nominally 3 months' supply on the assumption that the same total number of coins would be collected as before and that they would be divided equally among the three new bronze denominations. These were quite arbitrary assumptions, but as has been said, accuracy in this element of the stockpile was not critical.

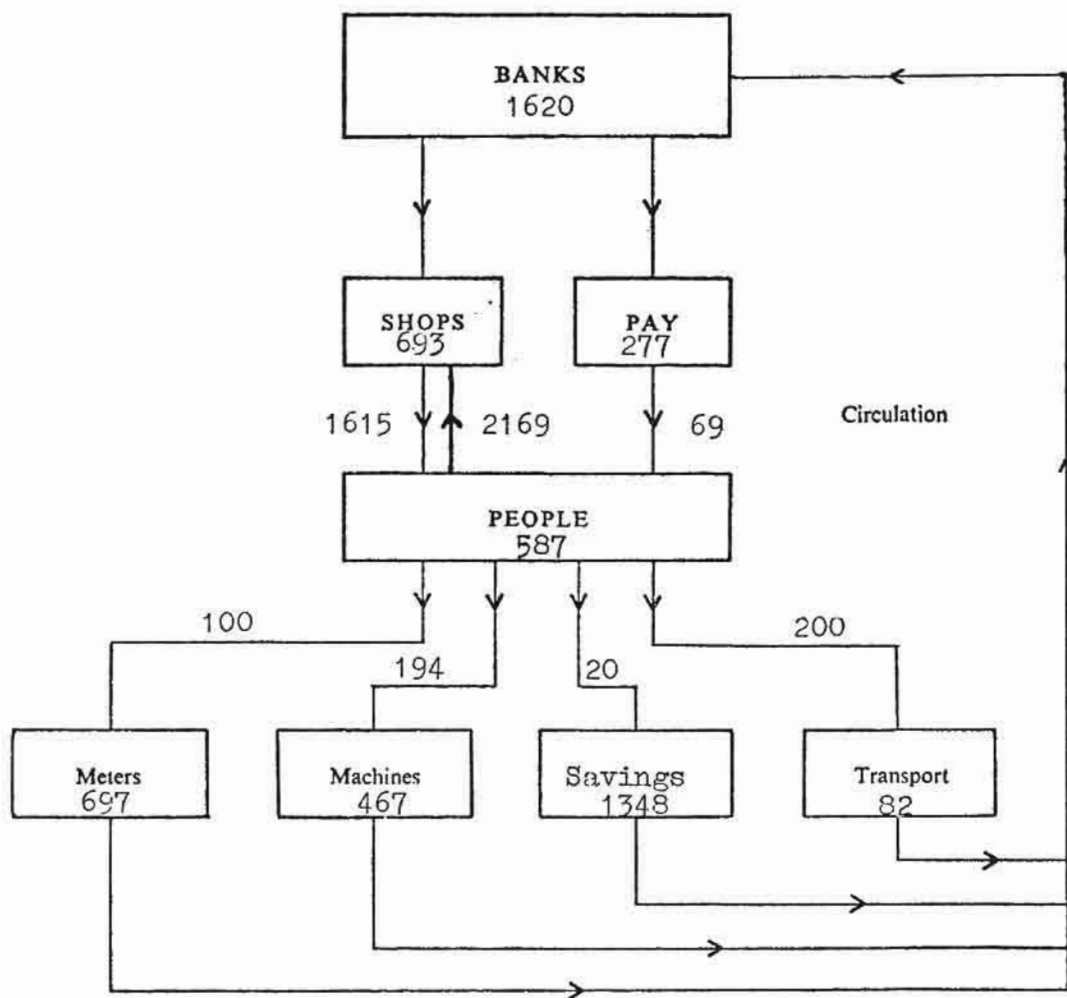
The transaction element of the stockpile was both critical and difficult to calculate. It was felt safe to assume, since decimalization itself would not affect the total number or the total value of transactions, that the total face value required would also not change, but there was no obvious way of translating that value into the different decimal denominations available. First thoughts were simply to translate the values of each of the old denominations into their nearest equivalent in the new system. This seemed straightforward enough in the case of the old one penny and threepenny pieces which each had near equivalents in the new half penny and new one penny respectively, but there was difficulty in the case of the sixpence which had no such near equivalent and which was known to be in circulation in disproportionately large numbers. (The survey had shown that one-third of all sixpences changed hands in multiples and thus apparently fulfilled the role of shillings and florins.)

Finally, it was decided to base the calculations on a model devised by the operational research consultants. Briefly, this model, which is described in Appendix I, showed that

TABLE III

Coin Distribution and Flow

The boxes represent coin 'reservoirs'; the contents are shown in millions of coins. The arrows represent flows between reservoirs—in millions of coins per week.



if it were assumed that all transactions were always performed using the minimum number of coins, and that prices were evenly distributed, the number of coins of a particular denomination that would be needed would depend only upon the ratio between the value of that denomination and the one above it. This reasoning suggested that the new bronze transaction coin should be provided in the ratio of 14 two pence coins for every 10 half and one penny coins.

The assumptions on which the model was based were clearly unlikely to be wholly valid in practice, and existing systems were therefore examined to see how far they differed from this theoretical one. It had been noticed from the survey that till holdings

were typical of transaction reservoirs as a whole, and on the assumption that this would be true elsewhere small-scale surveys were arranged of till holdings in five other European countries and in the United States. The results of these are shown in diagrammatic form in Appendix II. Over all they seemed to show very reasonable conformity with the model, but there were several instances where particular denominations, like the U.K. sixpence, circulated in unexpectedly large numbers. As this phenomena could not be explained and it could not therefore be forecast which of the new decimal coins might be similarly popular, it was decided to add 50 per cent to all the quantities of transaction coin shown to be required by the model.

DISTRIBUTION

Getting the total of the decimal stockpile right was only part of the problem, as it was clearly vital that the coins should be in the right place at the right time. As 'D' Day approached it had become increasingly clear that the change-over would be very rapid and that substantial demands for the decimal coins would develop within a few days everywhere. Before 'D' Day stocks had to be got into some 14,000 bank branches which in turn had to distribute them to their customers.

Past experience of the amounts of coin handled by particular branches was unhelpful, since during the early part of the changeover a completely new pattern of coin circulation was to be expected. Normally, some bank branches tend to be net receivers of coin while others are net issuers, but around 'D' Day all could be expected to become issuers of the new coinage and for a time there would be no flow-back.

In the end no means could be found of predicting the likely requirement of individual bank branches and it was decided to attempt no more in the first instance than to get broadly the right amounts of coin to particular areas of the country. This was done on the basis of population and branches' normal stocks of £sd coins. (By themselves the latter were not a reliable guide since the survey had revealed that in relation to population those in the south-east of England tended to be about twice as high as those in the north.) The banks made special arrangements to facilitate the sharing of stocks between their branches at local level, and in order to reduce the magnitude of any possible last-minute redistribution problem, bank customers were invited to place orders for their 'D' Day requirements well in advance. Regional reserves were established at a number of places with a main reserve at the Mint itself. A nice balance had to be established between amounts committed to the reserves and the amounts distributed, for the more coin that was held back in reserve the greater was the chance that local supplies would be found inadequate. On the other hand a thinly spread surplus would be difficult to muster if local shortages did develop. Past experience had shown that rumoured shortages could all too quickly develop into real shortages because of the tendency for users to react by building up private stocks. Operational research techniques were used to solve the problem.

OUT-TURN

The change-over when it finally began after more than four years of planning took place smoothly and was completed quickly. Within a few weeks the great majority of shops and transport authorities were working with the new system and large numbers of meters and vending machines had been converted. Coin stocks everywhere proved

adequate and no significant use of central reserves was necessary. Out of the four denominations that comprised the bulk of the stockpile, two had to be put back into production some three months after 'D' Day. This was expected and indicated that the stockpile calculations had been as nearly accurate as we could have hoped. Stocks of the other two coins, however, still remain, and these clearly had been over-provided.

Exactly why the surpluses have not yet been absorbed is difficult to explain. Coin demand in this country has always been subject to wide and unexplained fluctuation, and the effects of decimalization cannot therefore easily be separated from changes that might have occurred in any case.

APPENDIX I

A MODEL FOR TRANSACTION COIN

The Ideal System

Consider a hypothetical system which has only a penny piece and a two-penny note. If transactions are made using the minimum number of coins, it is clear that the number of pennies changing hands in one transaction can only be 0 or 1 and that the number of pennies that a person holds in his pocket can only be 0 or 1. Also, the price ending is 0 if the price is a multiple of 2d., or 1 if it is not. The table below lists all the possible transactions involving pennies in such a system.

<i>Prices ending in pennies</i>	<i>Number of pennies held before purchase</i>	<i>Number of pennies transferred</i>	<i>Number of pennies held after purchase</i>
0	0	0	0
0	1	0	1
1	0	1	1
1	1	1	0

These figures lead to the following conclusions:

- (i) The average number of pennies changing hands in a transaction is 0.5.
- (ii) The number of pennies held by a person after transaction can be 0 or 1 and both cases are equally likely, whatever the price of the transaction. This is important because if it were not so the system would be very sensitive to prices.

The table can be rearranged in a more compact form as illustrated in the last section of this appendix which also gives similar tables for the following hypothetical coin systems:

- one penny coin and a three-pence note,
- one penny coin and a four-pence note,
- one penny coin and a five-pence note.

It is clear that in each case, the numbers of coins held by a person after a transaction are equally likely whatever the price.

Generalization

It can be deduced in any system of coinage that the average number of coins of a particular denomination which changes hands in a transaction depends only upon the

ratio between this denomination and the one above it. The following table summarizes the information in the table overleaf.

<i>Ratio</i>	<i>Average number of coins per transaction</i>
2	0.50
3	0.89
4	1.25
5	1.60

For intermediate ratios, the average number of coins changing hands in one transaction may be calculated or found more simply by interpolation.

For instance:

<i>Ratio</i>	<i>Average number of coins per transaction</i>
2.5	0.70

[Appendix I is continued on p. 176.]

Transaction Coins Used in an Ideal System

Each table lists all the possible transactions when the value of the next denomination is respectively 2, 3, 4, and 5 times that of the coin considered.

Ratio 2	Price	Coins held before purchase		Coins held before purchase	
		0	1	0	1
	0	0	0	0	1
	1	1	1	1	0
		Coins transferred		Coins held after purchase	

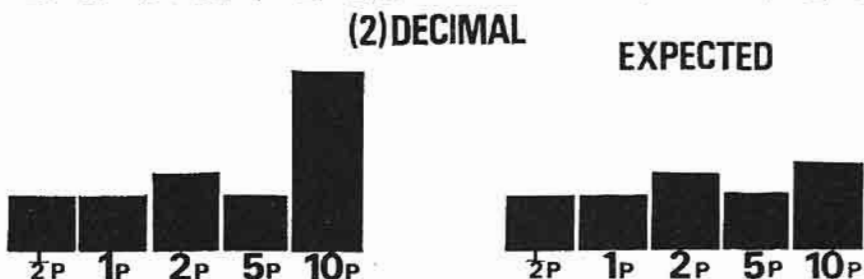
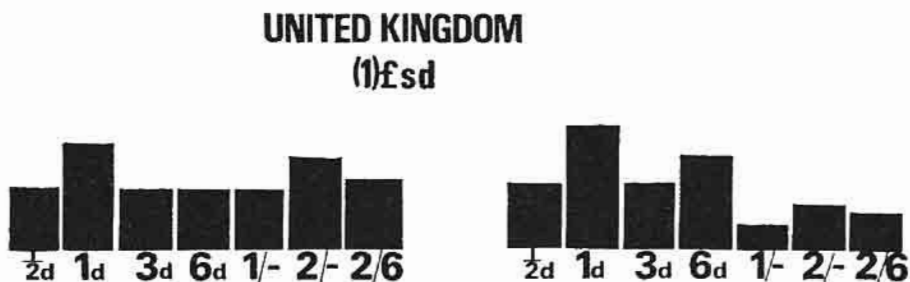
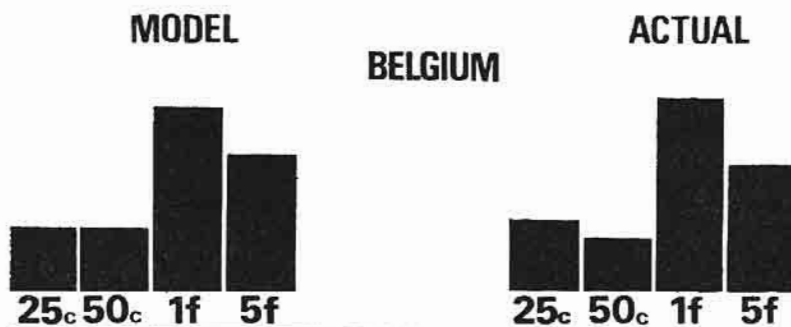
Ratio 3	Price	Coins held before purchase			Coins held before purchase		
		0	1	2	0	1	2
	0	0	0	0	0	1	2
	1	2	1	1	2	0	1
	2	1	1	2	1	2	0
		Coins transferred			Coins held after purchase		

Ratio 4	Price	Coins held before purchase				Coins held before purchase			
		0	1	2	3	0	1	2	3
	0	0	0	0	0	0	1	2	3
	1	3	1	1	1	3	0	1	2
	2	2	2	2	2	2	3	0	1
	3	1	1	1	3	1	2	3	0
		Coins transferred				Coins held after purchase			

Ratio 5	Price	Coins held before purchase					Coins held before purchase				
		0	1	2	3	4	0	1	2	3	4
	0	0	0	0	0	0	0	1	2	3	4
	1	4	1	1	1	1	4	0	1	2	3
	2	3	3	2	2	2	3	4	0	1	2
	3	2	2	2	3	3	2	3	4	0	1
	4	1	1	1	1	4	1	2	3	4	0
		Coins transferred					Coins held after purchase				

APPENDIX II

MODEL PREDICTIONS AND ACTUAL BREAKDOWNS
OBSERVED IN DIFFERENT SYSTEMS OF CURRENCY



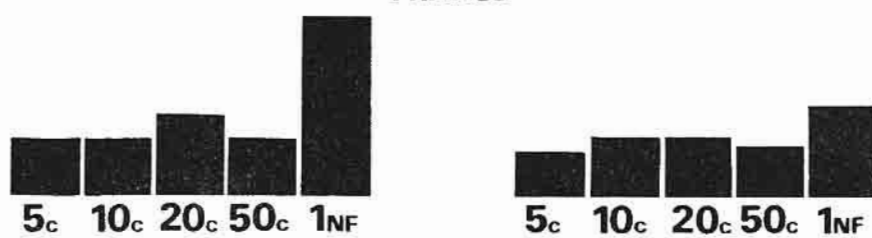
MODEL

ACTUAL

GERMANY



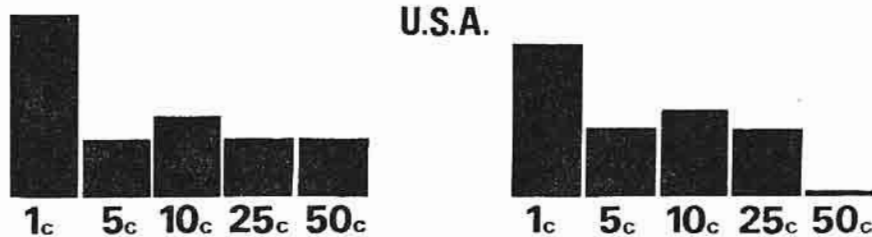
FRANCE



SWITZERLAND



U.S.A.



MISCELLANEA



FIG. 1.

A SMALL PARCEL FROM THE DORKING (1817) HOARD

THERE passed through Glendining's Sale Room on 24 November 1971 five lots of coins of Æthelwulf and Æthelbearht of which the greater part were fragmented (lots 141-6). An examination of the eleven coins confirmed the supposition that they were either the whole or part of a single hoard and inquiries elicited the fact that there was another coin of Æthelwulf from the same vendor and clearly from the same source. This was later offered as lot 805 in Glendining's sale on 25 May 1972.

Interest in the provenance of this little parcel arose particularly from its including coins of Æthelbearht. Though the coins of this king are relatively plentiful today, this is primarily due to there having been found no less than 249 in the Dorking Hoard of 1817. In fact the only other hoard provenance that I have noted is the Reading find of 1839 (Thompson 315) in which two specimens are recorded. It became, therefore, of interest to establish, if possible, whether this little parcel provided a fresh hoard provenance.

Through the good offices of Mr. W. C. French and Mr. P. Mitchell, to both of whom I tender my warmest thanks, the vendor was contacted and very kindly replied 'I know nothing about them, except I had a scrap of old paper which said they came from Dorking. They are the only ones I had and I have had them for 50 years. They came from my grandfather's cabinet, where I imagine they had been for a long time.' The vendor's grandfather was James Shuter, born 1854, and she added that they might have belonged previously to Doctor Shuter, who was perhaps his uncle.

Hawkins in his report on the Dorking Hoard

made it clear that some forty coins were dispersed without his having seen them.¹ These may be some of the strays, or may, of course, come from the portion of the find recorded by Hawkins, a large part of which was clearly later dispersed. All of the coins in this little parcel were of types and by moneyers recorded by Hawkins. They may be summarized as follows (the numbers in brackets are the lot numbers in the sales):

ÆTHELWULF

BMC V	North 596	Osmund (142)
XV	„ 600	Moneyer doubtful (fragment) (805) ²
XVII	„ 618	Ethelnoth (141)

ÆTHELBEARHT

BMC I	North 620	Degbe(a)rht (fragment). Possibly Æthelwulf (145)
		Ethe(lr)ed (fragment) (145)
		Herebeald (fragment) (146)
		Hunred (one whole, one fragment) (144 and 146)
		Maninc (143)
		No(thu)lf (fragment) (146)
		Viohtmund (two fragments) (145 and 146)

C. E. BLUNT

¹ *Archaeologia*, xix (1821), p. 110.

² The obverse legend of this coin is defective at a material point, and it is just conceivable that it reads

ECGBERT REX. The reverse legend is blundered and the coin is not certainly associable with either king. [Fig. 1.]

SOME NOTES ON EDWARD IV

IN a study of the period of Edward IV's reign a number of coins have come to light which show variants not known when C. E. Blunt and C. A. Whitton wrote their standard work on the subject nearly thirty years ago.¹ The majority of these are relatively minor variations of legend and stops, but nine seem to be of sufficient interest and importance to be recorded.

Groats

1. York/London Mule.

Obv. As Type VI York Mint, I.m. Sun, E on breast, large fleurs on cusps, none over crown, quatrefoils by neck, RE for REX (not previously recorded for this type), legend ends FRANCX.

Rev. Mint-name of London, as Type Vd3 with I.m. Rose, P3, no extra pellet. Wt. 47.9 gr. (Pl. II. 1).

This appears to be the only specimen known. The period of the I.m. Rose at the London Mint was August 1464 to July 1465, after which came the I.m. Sun 1465-6.² The reopening of the Royal Mint at York, with I.m. Sun, was probably also in July 1465. It is arguable that the superseded London die might have been given a further lease of life by being sent to York at a time when the mint there was faced with the problems of restarting production after closure since the early part of Henry VI's reign. The possibility of an E having been superimposed on the breast of a London coin is ruled out by the fact that there is in the British Museum a true York coin from the same obverse die (Pl. II. 2), ex Clarke-Thornhill Bequest, wt. 48.4 gr. Though slightly overweight it appears in no other way abnormal.

2. Type Xa3, London Mint, I.m. Long Cross Fitchy/Sun.

Obv. trefoils by neck and on cusps, none over crown, trefoil after REX.

Rev. no stops. (Pl. II. 3).

An unusual obverse initial mark has a pellet in one (if not both) of the upper angles of the Long Cross Fitchy. The pellet is clear in the left one but uncertain in the right. The coin is slightly clipped and weighs 44.5 gr.

3. Edward IV/Henry VI (Restored) Mule.

Obv. as Edward IV Type XII var. 1, I.m. Short Cross Fitchy, trefoils on all cusps, saltire stops.

Rev. as Henry VI Restored, I.m. Short Cross Fitchy, I2, no stops. (Pl. II. 5). Wt. 45.5 gr.

A groat of Henry VI with the same reverse die is shown on Pl. II. 6. A similar mule but with *rev.* I.m. Restoration Cross is known and is illustrated in NC 1937, Pl. V. 28.

4. Type XIV/XII Mule, London Mint.

Obv. I.m. Small Annulet, trefoils on all cusps, trefoil stops.

Rev. I.m. Short Cross Fitchy, no stops. Wt. 45 gr. (Pl. II. 4).

This mule does not appear to have been recorded prior to exhibition at a meeting of the Society in 1972, but since then another has turned up from different obverse and reverse dies. The reverse mule XII/XIV is known.

Half-Groats

5. Canterbury Ecclesiastical Mint, I.m. Pall/None.

Obv. quatrefoils by neck, trefoils on cusps, none over crown, no knot on breast, saltire stops.

Rev. no spur, saltire stops. (Pl. II. 7).

Coins have frequently been noted either with no knot or with no spur and have been recorded as mules with Type VII. This one, though not now particularly rare, does not appear to have been on record before and would seem to be the true Ecclesiastical Type VII which merged with the Royal Mint Type VII, I.m. Crown, on the closure of Archbishop Bouchier's mint in 1467.

6. Canterbury Ecclesiastical Mint, I.m. Pall/Pall.

Obv. Knot on breast, trefoils by neck and on cusps, none over crown, a cross in the fork of the initial mark, no stops, FRANC.

Rev. spur under TOR, P2, no stops. (Pl. II. 8).

Type V half-groats usually show quatrefoils or nothing by neck. Trefoils by neck do not seem to have been noted before.

7. Canterbury Ecclesiastical Mint, VIb/VII Mule, I.m. Pall/None.

Obv. knot on breast, quatrefoils by neck, ? saltire stops.

Rev. No spur, no stops. (Pl. II. 9).

¹ BNJ xxv (1945-8), pp. 4-59, 130-82, 291-339.

² Ibid. xxv (1945-8), p. 14.

The obverse initial mark Pall appears to have been struck over Sun. While this could be a mistake, it is significant that this device was in use at York during the same period, and that it also occurs on a coin from a different die illustrated in F. A. Walters's 'The Coinage of Edward IV',¹ though he does not comment upon it.

Pence

8. 2nd Reign York Penny, Type XIV.

Obv. I.m. Small Annulet, EDWARD DI GRA REX ANG, no marks by neck, no stops.

Rev. no quatrefoil. Wt. 11 gr.

This type was referred to by L. A. Lawrence in 'The Two Mints at York'² in which he took the view that it was issued by the York Royal Mint and that it was the only variety of penny issued there, probably for the reason that the prolific output from the Archbishop's mint met the demand. Brooke recognized this possibility in a footnote in *English Coins*, suggesting that the type might have been struck there during Archbishop Neville's suspension between April and September 1471.³ But in the text of *English Coins* he attributes the type to the archiepiscopal mint, and that attribution is supported by two coins illus-

trated by him in a previous paper which share an obverse die with I.m. annulet, and are struck from reverses respectively with and without the quatrefoil.⁴ Blunt and Whitton were of the opinion that the one without quatrefoil was issued while the temporalities were in the King's hands.

This penny (Pl. II. 10) is from a different obverse die, though apparently from the same reverse die as that without quatrefoil referred to above and illustrated by Dr. Brooke. In view of the extreme scarcity of these coins it is considered that it should be recorded.

Halfpence

9. Canterbury Ecclesiastical Mint.

Obv. I.m. Pall, trefoils by neck, EDWARD. 'DI. GRA. 'REX, no knot on breast.

Rev. ? spur under CAN. Wt. 5.9 gr. (Pl. II. 11).

Only one other halfpenny from Archbishop Bouchier's mint has been recorded⁵ but that was without marks by neck whereas this one has trefoils.

All the coins illustrated are in the writer's collection except No. 2, which is in the British Museum.⁶

M. DELMÉ-RADCLIFFE

TWO TUDOR NOTES

1. *A Doctored Sovereign of Henry VII*

IN their study of the coinage of Henry VII, Potter and Winstanley illustrate and describe a sovereign in the British Museum which lacks an inner circle on the obverse and has a number of fleurs-de-lis below the king (*BNJ* xxxii (1963), pp. 151-3 and Pl. X. 4). In other respects this sovereign, which they define as type IVa, is like the relatively common type IVb, with mint-mark obverse lis, reverse dragon, and I have previously suggested that the IVa coin was from the IVb dies but after recutting and modification of the obverse (*BNJ* xxxiii (1964), p. 125, n. 1). However, I have since examined the coin itself, which is in the British Museum, and the areas where the IVa obverse differs from IVb show burnishing of a kind that indicates alteration not of the die but of the coin. This is quite clear under magnification, and the

fleurs which have been added are not identical in shape, as they should be if put in the die from a punch. There seems to be little doubt that the IVa sovereign is no more than a doctored specimen of IVb. It came to the Museum from the B. C. Roberts Collection (1810). Roberts also had a IVb sovereign, and it seems that the IVa coin, being of a plentiful variety (Potter and Winstanley record nineteen specimens), was altered in the eighteenth, or early nineteenth, century in order to make a saleable item out of a coin in poor condition.

2. *A Base Groat of Henry VIII with Altered Mintmark*

The groat illustrated on Pl. I. 20 belongs to the earlier stages of the debasement of the coinage of Henry VIII (1544-5). Its most obviously unusual feature is the initial mark on the obverse, the lis

¹ *NC* 1914, pl. XXIV. 6. ² *Ibid.* 1925, p. 379.

³ *English Coins*, p. 159, n. 1.

⁴ *BNJ* xxi (1935), pl. I. nos. 9 and 10.

⁵ *Ibid.* xxv (1945-8), p. 339. Addenda and Corrigenda to p. 169.

⁶ The writer wishes to acknowledge a debt of

gratitude to Mr. Blunt not only for her dependence on his work on Edward IV but also for his unfailing kindness, assistance, and advice throughout. Thanks are also due to Miss Archibald for her careful consideration of each and every problem which has been brought before her.

apparently having been punched into the die over a circular mark, presumably pellet-in-annulet. The bust is that described by Whitton (*BNJ* xxvi (1949-51), p. 294 and Pl. XVIII. 6) as no. 1 (var.), the stops are trefoils and there is a pellet-in-annulet in the fork of each limb of the cross. The Tower groats, identified by the *Posui Deum* legend, and all of which have the initial mark lis, are divided by Whitton into two series, A, with saltires or annulets in the cross-ends, and B, with pellets-in-annulets in the cross-ends. The earliest bust listed by Whitton for series B is no. 2 but no. 1 (var.) also occurs (e.g. BM, Clarke-Thornhill 1180). On the testoons and gold coins pellet-in-

annulet replaced lis as mintmark at this period and the new groat, which with bust 1 (var.) must be one of the earliest of series B, therefore provides an indication that a similar change may have been contemplated on the groats when pellet-in-annulet was adopted as the ornament in the cross-ends. However, it may be no more than the error of a die-sinker who had recently made dies for other denominations. This coin was acquired in Switzerland in 1968 and its overseas domicile perhaps explains why it has escaped the notice of English numismatists hitherto. It weighs 2.53 g.

IAN STEWART

GLOUCESTER TREASURE TROVE (1972)

ON 19 May 1972 Mr. B. Partridge discovered a hoard of twenty-one sixteenth-seventeenth-century silver coins while engaged in building excavations at 17 Eastgate Street, Gloucester. The earliest of the coins were three worn shillings of 1560-1; the latest a worn half-crown of 1645-6.

The find was declared treasure trove at an inquest held at Gloucester on 3 August 1972, and none of its constituents was required by the national collection. It has been purchased by Gloucester Museum and the reward has been paid to the finder.

ELIZABETH I 1558-1603

No.	Denomination	Date	Initial mark	Weight/gr.	Type
1.	Shilling	1560-1	Cross-crosslet	87.9	..
2-3.	Shilling	1560-1	Martlet	87.6, 85.8	..
4.	Shilling	1602	2	87.8	..
5.	Sixpence	1562	Pheon	44.5	..
6.	Sixpence	1568	Coronet	42.6	..
7.	Sixpence	1578	Plain cross	38.7	..
8.	Sixpence	1584/5-7	Escallop	42.6	..
9.	Sixpence	1589	Crescent	46.1	..

JAMES I 1603-25

10.	Shilling	1604-5	Lis	63.7	Third bust
11.	Shilling	1605-6	Rose	90.1	Fourth bust
12.	Shilling	1606-7	Escallop	88.6	Fourth bust

CHARLES I 1625-49

13.	Half-crown	1640-1	Star	233.6	(3a ²)
14.	Half-crown	1641-3	Triangle in circle	228.7	(4)
15-16.	Half-crown	1645	Eye	233.8, 216.5	(3a ³)
17.	Half-crown	1645-6	Sun	233.8	(5)
18.	Half-crown	1642-4	Lion (York Mint)	219.6	N 2315
19.	Shilling	1634-8	Illegible	92.6	..
20-1.	Shilling	1641-3	Triangle in circle	88.9, 88.6	(4 ⁴)

S. A. CASTLE

THE LOCHGELLY FIND

LOCHGELLY (89 High Street), Fife, 13 April 1971. 1 *N*, 159 *R* English, Scottish, British, Continental. Deposit: after 1762–? c. 1770.

The find circumstances, as recorded in a police report to the Procurator Fiscal, are that when a footpath along the back of The Old Ship Inn (of which the title deeds as an inn go back to 1686) was being removed to make way for an extension, coins were noticed embedded in lumps of excavated clay. No container was seen. The coins recorded were recovered by four men including Mr. A. McLean, jnr., the proprietor.

The greater part of the coins were extremely worn. Much the largest number that can be identified are of William III, 42 certainly from the great English re-coinage of 1696–7 with 3 from 1700–1, while another 69 belong at least to his reign and 11 worn quite smooth may have done so. The amount of wear can be gauged from a sample of 50 shillings which weighed an average of 78.5 gr. each compared with the official issue weight 91.0 gr. The 11 recognizably earlier coins could sometimes only be dated by their edge inscription. The relative wear of the 23 later dateable silver coins, spanning the following 45 years, suggests that the whole formed a single hoard. The 1745 shilling is well worn, which allows us to associate the one gold coin with the silver, a 1762 4-escudos of Joseph I of Portugal only slightly worn (but unfortunately recently scraped), giving a concealment date perhaps about 1770.

So hoards possibly connected with the Fifteen and Forty-Five Risings continue to be conspicuous by their rarity compared with those from earlier civil wars. The £100 sterling in Queen Anne shillings from Auchove, Lumphanan, was indeed identified by late eighteenth-century local tradition with the later Rising,¹ but a Hertfordshire hoard ending with 1745 shillings was placed very soon after that year by Grueber who specifically did not associate it with 'any special circumstances'.² The 21 coins from Fala Moor, Midlothian, hardly form a possible single hoard 'Charles I and Charles II and George II' in the absence of William III, and a date c. 1670 is more likely for most of them.³ The most convincing are

the gold coins (39 Portuguese ending in 1745 and 52 English from Charles II to George II) found in Gawthorpe Hall, Lancashire, where there was involvement in the Rising.⁴

The whole eighteenth century in Scotland seems devoid of other hoards till three around 1800. These compare very interestingly with Lochgelly. The two published in 1916 by Sir George Macdonald⁵—Corskier (Mountcoffer), Banffshire (215 *R* and 172 *Æ*) and Juniperbush, Berwickshire (28 *R*) were in an even worse state than Lochgelly and also predominantly composed of William III silver, for probably most of the silver that was illegible (over 50 per cent) should be reckoned as his. They included coins countermarked with initials, unfortunately neither described nor kept. Sir George also recorded that 22 (nearly one-sixth) of the Corskier shillings and all but 2 out of 77 sixpences there had been 'crooked' to test the metal. This had been done to a less extent at Lochgelly—7 out of 8 sixpences were crooked and/or deliberately dented but only 2 shillings (and 1 pierced), and 1 dented half-crown. The Corskier hoard included 16 late eighteenth-century trade tokens, the latest of 1796, all of which were worn, suggesting an early nineteenth-century concealment. The Juniperbush hoard, and another from Barvas in Lewis consisting of 12 halfpennies including a 1793 token, some countermarked,⁶ need not have been much earlier, if at all.

Some of the Lochgelly coins are listed as rare:⁷ half-crown 1696V, shilling 1701, shilling 1707 E*, sixpence 1697—MVS. Another shilling seems to have E- instead of E* and to have had the (faint) E struck over with an F. Two of the 1707 E were obv. die duplicates, while one with illegible date proved to be from the same 1708 E* dies as one in the NMAS collection (Richardson 23). It was then incidentally noticed that another NMAS 1708 E* shilling (Richardson 18, catalogued as 1st Scottish (2nd English) head) is an unrecorded variety of the 'Edinburgh' head with the upright curls solid not hollow, and curving in opposite directions. As the following full list shows only two of the Anne shillings were certainly of the Tower mint and there were no half-crowns recorded later than 1700.

¹ *Statistical Account of Scotland* 6 (1793), p. 688; *Bibliography*, GA9.

² *NC* 1886, p. 166; *Bibliography*, GC2.

³ *PNS* 1865, p. 8; *Bibliography*, GC5.

⁴ *Chetham Soc. Publ.* xliii (1857), p. 525; *Bibliography*, GC3.

⁵ *PSAS* 1915–16, 275–8; *Bibliography*, GC9 and GD6.

⁶ *Ibid.* 1960–61, 329; *Bibliography*, GD37.

⁷ H. A. Seaby and P. A. Rayner, *The English Silver Coinage from 1649* (1968).

ENGLAND (136): Charles II (9) Half-crown 1670 2, (1666-72) 1, 1673 1, 1677 2, 1677 1, shilling (1666-83) 2; James II (2) shilling 1686 1, ? 1; William III (114+11?) Half-crown 1696 no mm., early harp 3, small shield 1, B early harp 1, V do. 1, 1697 no mm. 6, B 2, E 3, N 1, 1700 (TERTIO) 2, shilling 1696 no mm. 2, E 1, N 1, Y 1, 1697 no mm. 1, (1696-97) B 3, C 4, E 2+2 prob., N 1, Y 3+1 prob., 1701 no plumes 1, dates ? no mm. 39, ? 27, William? 11, sixpence (1696) 1, 1697 no mm.—MVS 1, date ? 3.

SCOTLAND (7+3?): Anne shilling 1707 E* 2nd bust 1, E- do. 1, 1707 E 3rd bust 4, (1708) E* do. 1, Scottish? 3rd bust? 3.

U.K. (12): Anne (2) shilling 1709 1, 1711 4th bust 1; George I (8) shilling 1715 roses and plumes 1, 1720 plain 1, 1723 SSC 4, sixpence 1723 SSC 2; George II (2) shilling 1734 1, 1745 1.

FRANCE (1): Louis XV 12 sols 1730 1.

PORTUGAL (1): Joseph I 4 escudos 1762 1.

Disposal: Twenty-five coins representative of condition as well as reign, etc., to National Museum of Antiquities of Scotland, rest returned to finders.

R. B. K. STEVENSON

LEEK WOOTTON (WARWICKSHIRE) TREASURE TROVE

THREE nineteenth-century gold coins were found in a lump of earth by Masters Michael Leach and Derek Crawford on 20 July 1971, while playing in a field near Loes Farm, Leek Wootton, Warwickshire. After the coins were taken to County Museum, Warwick, further search was made at the findspot, beneath the root of a near-by rotting tree stump, and a total of seventeen gold coins was finally recovered. The find was declared treasure trove at an inquest held at Warwick on 20 November 1971. Its constituents were sold to the trade and the proceeds were paid to the finders.

Sovereigns

George IV

1.	1825
2.	1826

Victoria

3.	1842
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4.	1845
5-6.	1852
7.	1853
8.	1854
9.	1859

Half-sovereigns

George IV

10.	1825
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Victoria

11.	1842
12.	1844
13-14.	1846
15.	1849
16.	1853
17.	1855

S. A. CASTLE

RICHMOND PARK (SURREY) TREASURE TROVE

ON 30 May 1972 Masters B. W. Bannister, P. J. S. Lyle, and A. E. Thorogood discovered eleven nineteenth-twentieth-century gold coins while digging under the root of an oak tree at Barn Wood, Richmond Park. The coins were contained in a cork-sealed glass bottle. The find was declared treasure trove at an inquest held at London W. 6 on 26 July 1972. All eleven coins have been sold to the trade and the proceeds paid to the finders.

Sovereigns

Victoria

No.	Date	Type
1.	1889	St. George
2.	1900	"

Edward VII

No.	Date	Type
3.	1903	St. George
4.	1904	"
5-9.	1906	"

Half-sovereigns

Victoria

10.	1878	Shield
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Edward VII

11.	1902	St. George
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S. A. CASTLE

REVIEWS

Le Trésor de Fécamp et le monnayage en France occidentale pendant la seconde moitié du x^e siècle. By F. DUMAS-DUBOURG. Pp. xxix + 303, 30 plates. Paris, Bibliothèque Nationale, 1971.

IN this substantial volume Madame Dumas records in exemplary fashion a great hoard of coins found in two earthenware pots in the course of excavating operations for a new building in the town of Fécamp in 1963. Over 8,500 coins were recovered but the original number is thought to have been substantially greater. Of those recovered over 6,000 were from the mint (or mints) of Rouen, of which 2,782 are attributed to the archbishop; over 1,300 from Le Mans, and over 500 from Quentovic. The bulk of the remainder came from fairly scattered areas in France. Of foreign coins there were few: 8 from Lorraine, 3 from Italy, 4 from England, and 2 of an English type but clearly not official issues. These last are particularly discussed below. An interesting feature is that, out of this large total, there were only 35 oboles, and of these 25 were of Quentovic. The average weight of these last was 0.47 g., noticeably lower than half the lightest of the deniers of this mint, 1.12 g. A comparable feature has been noted in English halfpennies of the period. In contrast to our own coinage, however, where the round halfpenny, always rare, disappears completely after the reign of Edgar, the proportion of oboles in French hoards goes up in the eleventh century.

The four English coins, one of Edgar of the two-line type and three of Edward the Martyr (975–8), provide the firmest positive *post quem* dating point for the deposit. Negative evidence tends to point to a date c. 985.

Before listing the coins, the author gives a general review of the coinage in western Francia from the ninth century, provides a useful table summarizing the weights of the coins from the various mints and compares them with the weights recorded in the not dissimilar hoards from Rennes and Le Puy.

The large number of duplicates in the hoard made it possible for a few to be tested by destructive methods and the results of analyses of 65 coins by chemical process and by neutron activation are set out in two informative tables.

The organization and operation of mints, a

subject that has been much under review of late in England, is studied with several conclusions of mutual interest. The author considers that there were a limited number of die-cutting centres and supports the view of M. Lafaurie that the ten mints mentioned in the Edict of Pitres may in fact refer rather to ten such centres since the number of mints was substantially larger. She also discusses the significance of the die-links between mints and wonders whether they might imply either that moneyers worked at one centre or that they moved from one place to another. A detailed study of 2,317 of the ducal coins of Rouen in the hoard shows that 245 obverse dies and 90 reverse dies were used in their production. The reverse dies were used with a large number of obverses, generally 6–10 but sometimes much more. 15 reverse dies are found producing 1,555 coins, in groups varying from 40 to 358 specimens. By contrast, a study of 311 large flan coins of Quentovic shows that they were produced by 17 obverse and 20 reverse dies. Weights are recorded throughout and there are informative histograms of the weights of the coins of Rouen and Quentovic.

The role of coin in commercial transactions is discussed. As in England, although the economy was essentially based on silver, there are many references in documents to gold and a useful summary of instances of this, mostly eleventh-century, is given in a lengthy footnote on pp. 62–3.

The position of Brittany is reviewed at a number of points in the book, but the conclusions are not entirely clear. At one point the view is taken that Brittany hardly used coin at this time, that Breton coins first appeared in the eleventh century (p. 53) and that Brittany was seemingly closed to all monetary economy (p. 62). But on p. 61 there is reference to a hoard buried c. 920–3 which contained Breton coins and in the present hoard a denier is attributed to the mint of Nantes and dated to the second half of the tenth century and some comparable material is also regarded as Breton (pp. 235–6). But if in detail the conclusions appear somewhat confused, what emerges clearly is that there can have been little regular coinage from Breton mints in the tenth century. This has a relevance when one comes to look at the two pieces of English type but not of English style referred to earlier. On what in English parlance one would call the obverse there is a cross

surrounded by a circular legend, blundered, but in which elements of GRATIA DEI REX can clearly be distinguished. On the other side the name Eadmund is written in two lines with three crosses between and an ornament like a sideways s above and below. The general type can be seen therefore to resemble the familiar two-line type of tenth-century England. But in detail there are marked differences. The cross on the obverse extends virtually to the inner circle, unlike the small cross found in the centre of the English coins; the lettering, as the author points out, is typically Carolingian in form as is the legend itself; in fact looking at the obverse in isolation there would be nothing to suggest that the piece was not Carolingian. It is the other side that must excite special interest in the minds of English numismatists. An unusual feature on the reverse is the sideways s at top and bottom in place of the usual three pellets. This is found on rare coins of King Edmund by the moneyer Eofermund (e.g. Lockett 582) and so need not, as the author suggests, be regarded as a purely continental one. Another coin on which this same ornament is found was struck for King Eadred, though in this case it occurs either side of the central cross of the reverse. What is, however, significant is that the moneyer in this case is Eadmund. It is possible that these between them could be the source of inspiration for the type on the Fécamp coins.

Though very similar, the two coins are from different dies. Both are in mint condition and the author suggests a date c. mid-tenth century and considers that the dies were made by a man of continental origin and that they may have been struck in western Francia rather than England. Their weights, 1.24 g. = 19.1 gr. and 1.10 g. = 17.0 gr., would be low by the standards of English coins but within the margins shown for the Rouen coins in the hoard, and few English numismatists would be likely to dispute that these two coins are of continental and not English origin. The recent identification of a coin of English type found at Mont St. Michel and seemingly bearing the name of a Duke of Brittany (*BNJ* xl (1971), pp. 1-16, especially pp. 7-11), opens up interesting possibilities that there may have been in Brittany in the

tenth century a limited issue of coins of English types and invites renewed attention to a number of irregular coins in the English series of this time, some of which may prove to be associated with them.

English numismatists must remain indebted to Madame Dumas for publishing so detailed an account of this great find and, in particular, for adding these two hitherto quite unknown pieces to our store of knowledge.

C. E. B.

The Lincoln Mint c. 890-1279. By H. R. Mossop, edited by Veronica Smart, with an introduction by Michael Dolley and an analytical note by C. S. S. Lyon. Corbitt and Hunter Limited, Newcastle upon Tyne, 1970, 32 pp. + CII plates + analytical appendices.

WHEN I published my thesis on Scandinavian personal names in 1968,¹ I endeavoured to excerpt names from as many published sources as possible. There was one source of material, however, which I left practically untouched. The only coin inscriptions taken into account were the few in Michael Dolley's pamphlet on Viking coins.² I was not, of course, unaware of the existence of Hildebrand's catalogue of Anglo-Saxon coins in the Stockholm collection,³ for this had been one of the main sources used by Erik Björkman when compiling his pioneering lists of Scandinavian personal names in England.⁴ I had, however, been reluctant to make use of the material in Hildebrand, since I felt far from competent to assess the significance of the variant spellings of the personal names on the coins. My decision to ignore the names of the moneyers from the mints in Lincolnshire and Yorkshire had also been prompted by the fact that my Danish colleagues had decided to omit the names of moneyers from the period before 1076 from the dictionary of Old Danish personal names, on the grounds that these names were borne by foreign moneyers.⁵ It was Kristian Hald who had demonstrated in 1934 that the names on the early Danish coinage included not only names of Anglo-Saxon and continental Germanic origin but also names of Scandinavian origin whose linguistic

¹ Gillian Fellows Jensen, *Scandinavian Personal Names in Lincolnshire and Yorkshire*, Navnestudier 7, Copenhagen, 1968, referred to below as Fellows Jensen.

² Michael Dolley, *Viking Coins of the Danelaw and of Dublin*, London, 1965.

³ B. E. Hildebrand, *Anglo-sachsiska mynt*, 2nd edn., Stockholm, 1881.

⁴ Erik Björkman, *Nordische Personennamen in England*, Halle, 1910, and *Zur englischen Namenkunde*, Halle, 1912.

⁵ *Danmarks gamle Personnavne*, I-II, ed. Gunnar Knudsen, Marius Kristensen and Rikard Hornby, Copenhagen, 1936-64. See the Introduction Vol. I, p. vii.

forms reveal that they must have come to Denmark from the Danelaw and hence that these inscriptions, in spite of the fact that they could be dated so closely, were useless as evidence for the dating of Danish sound developments.¹

At the public defence of my thesis I was taken severely to task by Dr. Georg Galster of the Royal Coin Cabinet in Copenhagen. He pointed out that by ignoring the moneyers' names on the coins in the collections at Stockholm, Copenhagen, and London I had cut myself off from a wealth of material in the form of personal names that could be dated with exceptional accuracy. Dr. Galster then produced a suitcase full of books that could have been used in my work, first and foremost the *Sylloge* volumes that had appeared up to then. I could only regret my negligence, promise to reform, and hope that it would be possible to produce a revised and expanded second edition of my book in which the names of the moneyers would take their proper place.

Since that time I have excerpted the names from the *Sylloge* volumes as they have appeared and from other coin publications that have come my way. I cannot deny that I have found a number of names from Lincolnshire and Yorkshire which are not included in my thesis, although the majority of the Scandinavian names borne by the moneyers had also appeared in other sources.² The appearance of *The Lincoln Mint*, however, is particularly welcome to all students of personal names in England and Scandinavia. In it we are presented with the names of all the moneyers known to have been working at Lincoln between c. 890 and 1279 and can observe the changing proportions of Scandinavian, English, and Norman names with the passage of time. A brief look at the fold-out table of types and moneyers is sufficient to reveal how the numbers of moneyers with Scandinavian and English names drops markedly after the reign of the Conqueror, while the names of continental introduction, not unknown even as early as the reign of Edward the Martyr, become dominant in the reign of Stephen and are the only ones to be found from the reign of John onwards. This is a graphic confirmation of the tendencies revealed by sources other than the coinage. It will be noticed, however, that the

last moneyers with Scandinavian names were active in Lincoln in the reign of Stephen (1135–54), whereas it was not until after c. 1225 that the Scandinavian names drop out of use in Lincolnshire.³

The table of moneyers serves as an excellent introduction for the philologist to the book as a whole and he will not be disappointed if he pursues his studies more deeply into it. Michael Dolley's introduction gives an impression of the immensity of the task that faced H. R. Mossop and his collaborators and of the significance of the completed work for numismatists, historians, and others. The concise analysis of the material by Stewart Lyon must surely be a model of its kind and is invaluable for a reader who is unfamiliar with the terminology and techniques of numismatics. The quality of the plates is pretty good in consideration of the fact that in an all-inclusive work of this kind it was not possible for Mr. Mossop to restrict himself to coins in good condition. The unpractised eye, however, will be grateful for the explanatory material provided beside and after the plates and only regret that a transcription of the individual inscriptions is not provided. The problems connected with the choice of a head-form for the moneyers' names are discussed by Veronica Smart in the opening of her essay and she has undoubtedly made the correct decision in allowing 'the heading to emerge by taking for each moneyer the spelling of his name that appears on the greatest number of his dies, the other forms being given in descending order of frequency'. This brings me, however, to one of my criticisms. For anyone interested in the names as such, it would have been useful to have had all the forms taken by each individual name assembled at one point, perhaps in the index. Any assessment of the material as a whole would have been greatly facilitated by such a presentation, although its lack is compensated for to some degree by Mrs. Smart's own discussions of the significance of such variations in spelling as *Os-/As-*, *Ulf-/Wulf-*.

There are very few points on which I would disagree with Veronica Smart on the interpretation of the names. I would prefer to treat the name *Ræienold*, *Reinold*, *Reinnald* as a loan from continental Germanic, since it never appears on the

¹ Kristian Hald, 'Om Personnavnene i de danske Møntindskrifter' (On the personal names in the Danish coin inscriptions), in *Studier tilegnede Verner Dahlerup*, Copenhagen, 1934, pp. 182–7.

² *The Lincoln Mint*, for example, adds the following Scandinavian names to those in Fellows Jensen: *Geirfinnr*, **Grind*, **Snolf* (<*Sneulfr*), **Væðlauss*,

**Vitlauss*, *Vilgrip*.

³ Cf., e.g., Fellows Jensen xvii and the works cited by Herbert Voigt in 'Die englische Personennamenkunde, Ein Forschungsbericht (II. Teil)', in *Archiv für das Studium der neueren Sprachen und Literaturen* 200. Band. 115. Jahrgang. 2. Heft (1963), pp. 110–11.

coins with the regular *Ragn-* spelling of early Scandinavian sources. The name *Þadlos*, *Þedlous*, *Þedlos*, *Þedles*, *Þaðlos*, borne by a moneyer of Cnut and Harold I (Plates LVI and LX), which is considered by Mrs. Smart to be of doubtful origin, must be a Scandinavian nickname in *-lauss* 'less', a parallel formation to **Bróklauß* 'without breeches' (Fellows Jensen 65), **Toglauss* 'ropeless' (Fellows Jensen 286) and **Serklauß* 'shirtless' (Björkman (1912) 73). The forms of the moneyer's name would then represent Scandinavian **Váð-lauss* 'without clothes', the first element being *váð* f. 'a weed (cloth cut and sewn)', cf. cognate Old English *wæd* and modern English (*widow's*) *weeds*. Spellings in *Þed-* and *-les* show substitution of the cognate English elements *wæd* and *lēas*. If the form *Þitlos* of a moneyer of Harold I (Plate LX) is not merely an error for *Þadlos*, it could be another Scandinavian nickname, **Vitlauss* 'witless'. Further additions to the Scandinavian names in the fold-out table are *Hildulf* (Plate LXIII, possibly a Scandinavian coin) and *Vilgrip* (*Þilgrip*, Plate LXXII).

I am not sure that I would agree with Veronica Smart's explanation for the absence of the element *Thur-* in English personal names, namely that 'it was too explicitly devilish even for a people who could countenance the generic *Os*, but a longer period of acceptability had established it amongst the Norsemen'. It was not until the Viking period that names in *Þór-* became extremely popular in Scandinavia and these names remained popular there after the conversion to Christianity. The generally accepted explanation for the appearance of names in *Þór-* in Scandinavia is the one put forward by E. Wessén,¹ namely that most of them arose as the result of variation by substitution of *Þór-* for *Ás-*, since *áss*, 'a god', was used first and foremost of Thor. This explanation is reasonable enough but it does not explain why compound names in **Þunra-* are practically unknown outside Scandinavia. Kristian Hald has recently made a tentative suggestion that the first *Þór-* compound to arise in Denmark may have been *Þórir* (almost the only name to be found in the Danish place-names in *lev* which are assumed to derive from the Migration Period) and that this name was originally an appellative denoting 'Thor's priest' or 'priest of the thunder'.²

Veronica Smart's essay concludes with some

remarks on Sir Francis Hill's scrutiny of the Lincoln moneyers and his attempts to identify them, on the extremely long lives in office of a few moneyers, e.g. *Osferth* (997–1056), and on the problem of determining whether names which recur after an interval of time refer to one moneyer or more. It is to be hoped that she will find time to discuss some of the linguistic and genealogical problems at greater length elsewhere. There is at least one philologist who would be grateful for a specialist treatment of the problems connected with the occurrence of the same moneyer's name at more than one mint. In the case of common names such as *Gamall*, *Ásketil*, and *Godric*, it is probably reasonable to assume the existence of more than one moneyer with the same name. What are we to make, however, of the GODWINE MO MINT on the exported *quatrefoil* die mentioned by Stewart Lyon on p. 12? Can this Winchester Godwine really have been operating in Denmark at the time? Is it not too great a coincidence that the series of Danish, Norwegian, and Swedish coins bearing kings' names all begin in the course of the period 991–7 with copies of Anglo-Saxon coins, all of which bear the name Godwine?³ Godwine is a common enough Old English name but it is hardly likely that three moneyer Godwines should all have emigrated to Scandinavia at the same time nor does it seem reasonable to assume that one single Godwine held an administrative position in all three countries at once. Is it not more likely that the inscriptions are simply copies of part of the inscriptions on genuine English coins? It has already been noted that a number of the inscriptions on Scandinavian coins accredit the moneyer to an English mint such as Winchester, Stamford, or Lincoln⁴ and the student of personal names is immediately struck by the re-appearance of extremely rare names of Lincoln moneyers on early Danish coins, namely *Farþegn*, *Garfin* (? an anglicized form of *Geirfinnr*), and *Úbeinn*. *Farþegn* struck Æthelræd II First Hand at Lincoln and his name is on coins struck for Cnut and Harthacnut at Lund (*Farðein on Lynd*). *Garfin* struck Æthelræd II Crux and Facing Small Cross, Harold II Pax and William I Profile at Lincoln and his name is on coins struck for Magnus at Lund (1042–7). *Unþegn* struck Æthelræd II First Small Cross, First Hand and Crux at Lincoln and his name is on a coin struck for Sven

¹ In *Nordiska Namnstudier*, Uppsala, 1927, pp. 81 ff.

² Kristian Hald, *Personnavne i Danmark. I. Oldtiden*, Copenhagen, 1971, pp. 42–50.

³ Brita Malmer, in *Commentationes de nummis seculorum ix–xi*, i, 1961, pp. 223–376.

⁴ Kolbjørn Skaare, in *Kulturhistorisk leksikon for nordisk middelalder*, xii, 1967, p. 63.

Estrithson at Lund (1047–75).¹ Had these moneyers really emigrated to Denmark or was it only their coins that had crossed the North Sea to be copied by Danish craftsmen or is the identity of names a mere coincidence? It would be interesting to hear the views of the numismatists on this question.

In a work of the scope of *The Lincoln Mint* there will always be small points on which it is possible to disagree with the authors and a specialist from another field of study is bound to find that some of the questions of greatest interest to him are not dealt with in as much detail as he could have desired. All in all, however, Mr. Mossop's team can be congratulated on a monumental achievement—an achievement which is all the greater because of its pioneering nature. The discovery of further coins from the Lincoln Mint since the publication of the book does not detract in the least from the achievement but is simply a salutary reminder to us all that our knowledge of the later Anglo-Saxon coinage is still very far from complete.

GILLIAN FELLOWS JENSEN

England before the Conquest: Studies in primary sources presented to Dorothy Whitelock. Edited by PETER CLEMOES and KATHLEEN HUGHES. Pp. xvi+418, 8 plates, 24 figs. Cambridge, University Press, 1971.

THIS book would commend itself to a numismatic readership if only by gratitude for Professor Whitelock's valuable association with the *Sylloge* enterprise, but its content stands independently. Though a miscellany, it abides fairly by its theme, and by including two essays on numismatic studies it places the coins of the period in a respectable—and true—perspective as part of our primary material for the study of Anglo-Saxon England. The opening paragraph of Martin Biddle's paper, stressing the dangers of self-sufficiency in any specialization, applies equally to numismatics as to archaeology, and we need the kind of cross-study awareness to which a book of this kind forces us, even though paradoxically it often serves to underline 'the mutual difficulty in reaching a critical evaluation of each other's results'.

Many of the papers strike a note of inquiry rather than any new certainties, and express the need for more work in given fields, but the over-

all picture is one of a society far from simple, crude, or isolated. One cannot examine each of the papers in any detail here but the numismatist would do well to have at the back of his own researches the contributions on the disputed nature and extent of the Scandinavian settlement, the persistence—or otherwise—of the Scandinavian language in England, the present revision of the view of the development of towns in Anglo-Saxon society, and the political philosophy of the authority that issued the coins.

Coming to the purely numismatic papers, Michael Dolley's essay takes for its starting-point a bronze repoussé brooch found at Sulgrave in Northamptonshire, to give a distillation of his thoughts on the Agnus Dei coinage of Æthelræd II which clearly supplied the pattern for the brooch, and which has interested him for many years. Muling and the formula of the reverse legend make the persistent and picturesque association with the millenium impossible and place the type firmly as immediately preceding Æthelræd's last type. Mr. Dolley considers the stylistic variety of the extant Agnus Dei coins within the Last Small Cross-Quatrefoil context of regional die-cutting centres. The departure from what had become by that time at the most no more than ingenious variation on bust/cross when it came to the design of a new coin-type suggests some particular intellectual or devotional preoccupation and Mr. Dolley explores the insular iconography of the subject along with liturgical changes and very cautiously points to the figure of Wulfstan with on the one hand his influence in secular administration and on the other his conviction of the moral corruption of the nation as the source of its misfortunes. Having thus considered the message of this small find he then considers the significance of the medium, tracing the connection between its base metal (and that of all extant secular metalwork of the period) and the royal monopoly on almost all the silver in the kingdom, in the light of the highly managed coinage postulated by Bolin, Petersson, and others.

Numismatics and onomastics have been linked in a somewhat dilettante fashion for over a century and philologists are becoming aware that this enormous body of linguistic material demands critical scientific treatment. Increasingly it is becoming obvious that the different forms in which the moneyers' names appear reflect not, as has been believed, an illiterate and capricious

¹ Cf. P. Hauberg, *Myntforhold og Udmyntninger i Danmark indtil 1146*, Copenhagen, 1900, pp. 193, 199, 207, 214.

blundering but aspects of dialect and sound-change that have in some cases only been doubtfully inferred from early place-name or documentary forms. Dr. von Feilitzen's collaboration with Mr. Blunt is a happy one and together they enter the hinterland of Edgar's reform. To the student more familiar with post-reform coins the last type of Edgar is a barrier behind which the names become wilder and odder. Unfortunately the comparative poverty of material from the next reign and the first—to some extent the first three—types of Æthelræd makes it difficult to see how sharp or gradual the break really was. To some extent the strangeness of the pre-975 moneyers' names is due to the very large proportion of continental Germanic names, which Dr. von Feilitzen analyses according to origin, and by the time we come to the vast quantities of coins from the 990s it appears that there has been a quite dramatic change in the personnel of the mints, so that it almost seems that one of the provisions of the reform could have been to cease dependence on immigrant moneyers and transfer the rights and duties of minting to English (and in the Danelaw areas Anglo-Norse) moneyers. One of the more salient points of the reform is the consistent recording of the mint, so one regrets the local anonymity of so many of the pre-reform coins, especially the silence of the east and north-east of the country. It would be most interesting to discover the distribution of these continental moneyers.

The contrast between the large number of names in the genitive case in the earlier type of Edgar and the lack of them after the reform must amount to a deliberate change in formula. *Oddas* under Æthelræd is very much a curiosity and the *Ælfrics* recorded as in Holm possibly requires more scrutiny. Holm is consistently if anything over-scrupulous in his recording of marks; his no. 114 *Snred* and 471 *Geowine* obscure more regular forms by the incorporating of a peck and a stop into the legends. In any case Holm transcribes the critical letter not as epigraphic Roman S but in almost its runic form, unparalleled so late on English coins, and it could be no more than the long-tailed comma that follows *Ælfric* on BEH 3102.

Of particular interest is the large number of names not known apart from moneyers in this reign. Finally one may say that this paper's arrangements of forms, mints where known, and the position of the coin within the reign briefly by type-number with reference to a summary, might well be used as a model for listing moneyers' names for philological purposes.

V. J. S.

Sylloge of Coins of the British Isles 16. Collection of Ancient British, Romano-British, and English Coins formed by Mrs. Emery May Norweb. Part I. By C. E. Blunt, F. Elmore Jones and R. P. Mack. Spink & Son, 1971. £4-00.

THIS sixteenth volume in the *Sylloge* series catalogues 421 coins that were in 1971 in the possession of the distinguished American collector Mrs. E. M. Norweb. Of these, two are Roman, three Scandinavian, and one a nineteenth-century forgery (no. 314, not recognized as such in the text), and the remaining coins divide into 38 Ancient British, 178 Anglo-Saxon, 96 Norman, and 103 of the Cross-and-Crosslets type of Henry II. Among these are a number of extremely handsome pieces which testify to Mrs. Norweb's continuing pursuit and capture of the rarest and most beautiful coins available.

The majority of these are discussed in very full introductory remarks by Mack, Blunt, and Elmore Jones, and their views on the coins as expressed there and in the catalogue part of the volume seem properly judicious; Blunt's remarks include an important observation on a coin of Æthelstan (no. 154) and draw attention afresh to a coin of Offa and Archbishop Icenberht from the same obverse die as a coin of Offa with the moneyer's name Ethelnoth (no. 83). One feature of the collection which gets only a passing reference but reflects a special trait of British numismatic science is that though only formed since the mid-1950s it yet contains eight coins traceable to collections or hoards pre-dating 1800 (nos. 64, 129, 149, 150, 151, 171, 173, 226) and many more with long and important pedigrees; two of the most interesting of the latter (nos. 217, 298) derive from an extremely select collection formed in the first half of the nineteenth century by the Revd. J. W. Martin on much the same principles as those which have guided Mrs. Norweb.

H. E. P.

Sylloge of Coins of the British Isles 18. Royal Collection of Coins and Medals, National Museum, Copenhagen. Part IV, Anglo-Saxon Coins from Harold I and Anglo-Norman Coins. By GEORG GALSTER. Published for the British Academy and the Carlsberg Foundation, by the Oxford University Press and Spink & Son, 1972. 54 plates. £6-60.

Catalogue of the R. P. V. Brettell Collection of Coins of Exeter and Civil War Issues of Devon. Glendining & Co., 28 October 1970. Compiled by P. D. MITCHELL. Introductory essay 'The Exeter Mint and its Moneyers', by I. H. Stewart. 76 pp., 18 plates.

Catalogue of the Important Collection of Anglo-Saxon Silver Pennies, formed by F. Elmore Jones. Glendining & Co., 12 and 13 May 1971. Compiled by P. D. MITCHELL. 87 pp., 36 plates.

THE last of the fascicules which will, apparently, be prepared by Dr. Galster of the Copenhagen collection covers the last few 'Anglo-Saxon' kings of England and the first four after the Norman conquest, together with a single specimen of Henry of Anjou. Like the others prepared by him, it suffers the defect of virtually ignoring the advances in Anglo-Saxon numismatic studies since 1881. The Anglo-Saxon portion is arranged according to Hildebrand and, great as his publication was at the time, it is now not fully adequate. Unfortunately the indexes do not compensate: there is no index of types: a massive exercise in proof-reading it would have been, but leaves an inadequacy that will have to be laboriously supplied by each student using the volume. Indeed, as it has been shown that the *Jewel Cross* type was struck concurrently in the names of Cnut, Harold, and Harthacnut, and that *Arm and Sceptre* was struck concurrently in the name of Cnut as well as Harthacnut, anyone working on these issues has not only to search through the plates of this volume but also of the three volumes devoted to coins in the name of Cnut: a formidable task. Such a search by the reviewer found only 10 *Jewel Cross* coins in the name of Cnut to add to the 308 in the name of Harold and 38 in the name of Harthacnut. But to the 75 coins of *Arm and Sceptre* type of Harthacnut have to be added no less than 137 in the name of Cnut. Of the very rare 'mules' which link types, the single specimen purporting to be *Short Cross/Jewel Cross* is found in the Cnut volumes (pl. 158); the one of *Jewel Cross/Fleur-de-Lis* is recorded under Harold (pl. 14); and the one of *Arm and Sceptre/PACX*, which links types of Harthacnut and Edward the Confessor, is again to be found in the Cnut volumes (pl. 120).

Nevertheless it must be acknowledged with pleasure and gratitude that the production of six fascicules by Dr. Galster (no less than one-third of all the *SCBI* volumes published to date) has given the student a mass of evidence that would not otherwise have been available. A complete, annotated, photographic record of the National-museum's trays of Anglo-Saxon and Norman coins—one of the three greatest collections in existence—is of inestimable value. If we are not to have a further volume of Copenhagen's English holdings, it may not be out of place to remember here that

the bulk of the *Short Cross* pennies there were meticulously catalogued by Dr. Galster and published by him in the *Numismatic Chronicle* as long ago as 1916. In all, a remarkable contribution to British numismatics by a man whose numismatic fame rests primarily in other fields.

It is unusual, though not unprecedented, for sale catalogues to be mentioned in these pages. Two recent such catalogues deserve to stand on the same book-shelf as the fascicules of the *SCBI*. Modelled on, and adapted from, the *Sylloge* format, they warrant equal consideration here.

The Exeter coins gathered by Brettell, though by no means a corpus, give a comprehensive view of the issues of that not unimportant mint, ranging in date from Alfred to William III. Moreover, the introductory essay by Stewart is a detailed study of the mint and its moneyers, and the connections with the minor Devon mints and their moneyers: a major paper which must not be lost sight of just because it is not in a more orthodox publication. The arrangement of the catalogue of coins is by reign, then moneyer, then type; but at the beginning of each reign is given a table of specimens by type. References are made, where appropriate, to the standard works such as *Hildebrand* or *BMC*, and the weight, die-axis, and provenance of each piece is given.

The Anglo-Saxon portion of the renowned collection of Elmore Jones is arranged by reign, mint, type, and moneyer. This is appropriate in the circumstances, as the priority he set for his personal collection was to represent each type in each mint: a factor which explains the most unusual predominance of coins of Edward the Confessor in a major Anglo-Saxon collection. Indeed, the presence of more than one moneyer in a type for a mint usually indicates some special point of numismatic interest. Some gaps in representation are due to his generosity in making particularly important pieces available to specialist collectors—the present writer gratefully acknowledges that he has benefited in this way. The range of the collection covers virtually the whole of the Anglo-Saxon period (his sceattas were, however, sold privately), but is concentrated on the last century before the Conquest, when mint signatures became the rule during the reign of Edgar. The arrangement by mint, with the earlier, non-mint-signed coins given at the beginning of the catalogue, perhaps conceals from a quick scrutiny that there are three mint-signed coins of Æthelstan (London, 'Weardbyrig', and York) and one Viking coin of 'Orsnaforda' in the collection. The weight of each coin is given, and its reverse legend in full.

Unfortunately, few coins have their provenance given, as Mr. Elmore Jones's records were stolen. Curiously no mention is made of die-axes, and references to standard works are few.

J. D. B.

Medieval Anglo-Irish Coins. By MICHAEL DOLLEY. London, B. A. Seaby Ltd., 1972 (in conjunction with The Institute for Irish Studies at the Queen's University, Belfast). Pp. x+90, 4 plates and illustrations in text. £3.00.

THE publication of a history of the coinage struck in, and of the currency of, Ireland under the English (up to James I) is an event of prime importance in British numismatics. Nothing of the kind has appeared for more than a century—indeed the only volumes devoted to the subject are Simon's *Essay*, first published in 1749, and Lindsay's *View* of 1839. Medieval Irish numismatics found no worthy successors to Aquilla Smith in the mid-nineteenth century and it has been a largely neglected field until quite recently. It is therefore appropriate that the author of this new book should be the most active and prolific of those students who have in the last ten years or so re-examined the subject with such energy and thoroughness. Indeed, although other distinguished numismatists such as O'Sullivan and Seaby were already in the field, they would I am sure be glad to admit that much of the momentum which has been generated derives from the personal enthusiasm and involvement of Mr. Dolley, just as at an earlier stage of his fruitful numismatic career he gave impetus to the study of the last century of Anglo-Saxon coinage and effectively transformed the subject within the space of ten years. There are few scholars of whom such can be said in respect of one series, let alone of two.

A word should first be said about the form of this book. It is a very slim quarto volume, lavishly decorated with scrolls and ornamented initials, with the text in double columns on the page, interspersed with groups of illustrations. Although this makes for convenience to the reader, the illustrations are not even in tone and some are unfortunately too blurred to be useful. This happily does not apply to four splendid colour enlargements on art paper, and this reviewer at least would willingly have exchanged the convenience of text blocks for better quality on separate plates. None of this is the author's fault, nor I understand was the long delay between type-setting (p. 79 suggests the manuscript was com-

pleted during 1969) and publication in late 1972 (although this makes for curious reading in the bibliographical section where 'forthcoming' works and others have long since appeared).

Much more important than the book's appearance is its content. This consists of a chronological survey of Anglo-Irish coins and coinage from John to James I (the middle ages, of course, as the title requires, can be thought to have lingered a century longer in Ireland than on the British mainland), a valuable survey of the circulation of extraneous coins in Ireland during the same period, a list, with discussion and maps, of 150 Irish coin-hoards, and a critical bibliography of modern Irish numismatics. The hoard list and bibliography are important additions to the literature in themselves and give the book permanent value as a work of reference.

The survey of Anglo-Irish coinage is, however, the heart of the work. Unlike many numismatic texts it is easy and entertaining to read, the vigorous, colourful prose bearing the unmistakable stamp of its author. It is an indispensable discussion of the subject, collecting as it does all the various strands of modern research, much of it still unpublished, and presenting the author's interpretation of them in the historical setting. For the reader who is less familiar with the complexities of the subject, most of the necessary background can be found in the sources listed in the bibliography, by reference to Dowle and Finn's *Guidebook* or Seaby's *Catalogue*, or in a suitable *History*.

There is, however, one more fundamental comment which must be made and this is that the confidence of the text seems sometimes to exceed the strength of the evidence. It is always difficult for an author to be entirely objective, and perhaps it is wrong that he should attempt to be; but in a scholarly work he should, I think, try to give the reader some guide as to which of his statements are, more or less, facts, which are probable and well-substantiated assumptions, and which are no more than conjectures or interpretations of his own. Though I am certainly not competent to judge such issues over the whole field covered in this book I have found that where I have adequate knowledge to hold my own opinion it often differs from Mr. Dolley's. Of course that is not to say that my judgement is right and his is wrong—only that I believe the evidence to be less conclusive than he does on a number of points and that historical interpretation of numismatic evidence is a rather dangerous exercise unless the facts themselves are beyond reasonable doubt. I will

give one or two examples of what I mean from the first few pages of the book.

The earliest extant Anglo-Irish coinage is considered by Mr. Dolley to be an extremely rare group of halfpennies, with a profile head and the name of (Prince) John, as Lord of Ireland in the lifetime of Henry II. On these, Mr. Dolley says, 'the reverse legends . . . give the surname of the moneyer (Raul Blunt, Elis of Dublin, etc.), but no indication of the mint. It is pretty certain, though, that the coins were struck at Dublin' (p. 1). But Allen's suggestion (*NC* 1938, p. 290) about the surnames was made in conjunction with his attribution of these coins not to Prince John but to John de Courcy, whose mints were in Ulster; and while a moneyer might describe himself, by way of surname, as 'of Dublin' at Carrickfergus or Downpatrick he would not be likely to do so at Dublin itself. This is not to say that Mr. Dolley's reattribution of the coins may not be correct, only that, if it is, Elis would not be using a surname: Scottish coinage at this period has what would be comparable examples of the mixture of mint-name and surname (e.g. both *Raul de Rocebu* and *Raul Derlig* at Roxburgh) within the same issue.

Next Mr. Dolley remarks (pp. 1-2) that 'one would have expected English-influenced coins struck at this period to have been pence . . . but the minor denomination [the halfpenny] was probably intended to signify the inferior status of the Lordship . . .'. There does seem to be a much more natural explanation of this apparent anomaly on monetary grounds. Almost everywhere in Europe, except in England, the penny or denier underwent during the eleventh and twelfth centuries considerable debasement from the standards of the Carolingian period. In France the denier retained its size but its metal was debased; in parts of Germany (and in Ireland) it lost weight and became a bracteate, so thin that it could only be struck on one side; whilst in the Low Countries in the later twelfth century its reduced weight was reflected in a smaller size. What seems to have happened under the Anglo-Normans in Ireland was that the fabric of the penny was changed from bracteate to reduced module. The 'halfpennies' are in fact pennies on an Irish standard, influenced by the low weight of earlier coins struck in Ireland, but rounded, perhaps, for convenience to equate with half of an English penny; and that is probably the reason why, when pennies on the English standard were introduced under John as king, they were accompanied for Ireland by round halfpence and farthings for domestic use, recognizing the habits of a people used to coins of a lower

value, even though round halfpence and farthings were not used in England. There is in fact documentary evidence in support of this interpretation. Roger of Wendover, though not always a witness of the highest class, makes the telling remark, in commenting on the introduction of the new coinage by the Justiciar de Gray, that *denarium terrae illius ad pondus numismatis Angliae fecerat*: not that he introduced the penny to Ireland, in addition to the halfpenny and farthing which it already knew, but that he brought the Irish penny, 'the denarius of that land', to the English weight standard.

The date of the introduction of the penny of English standard, the well-known coin with John's portrait in a triangle, is itself a matter of doubt. Roger plausibly (though not necessarily accurately) associates it with de Gray, who was installed as Justiciar about the end of 1208. Mr. Dolley believes that it dates from about 1205 and was in effect an extension of the English recoinage of that year to Ireland. Unfortunately we have no properly recorded English hoard of the period to help us. Mr. Dolley makes much of the fact (alluded to on p. 6, from the argument developed in *North Munster Studies*) that, amongst a series of entries in the Close Rolls of 1204-7 referring to payments to be made from the Irish treasure, there is one of 27 May 1205 which provides for the remittance of a sum *de denariis Hiberniae* instead of the more normal *de thesauro nostro Hiberniae* or similar. Pennies from John's Irish treasure are not the same as Irish pennies, and it does seem to strain the evidence to load this one variant phrase with such special meaning. After all, in November 1207 John was insisting that throughout the realm of Ireland no one should use any money other than his own Irish coin, an oblique reference, one would think, to the coins of de Courcy in the North. No one should sell or buy, the text says, *per aliam monetam quam per monetam nostram Hiberniae, quoniam eam per totum regnum currere volumus et non aliam*. Mr. Dolley reads this (p. 6) as a final demonetization of the early issues of John by the triangle coinage. The whole point of the triangle pennies was that they should be interchangeable with the English: as Roger of Wendover remarks, the king ordered the new coin to be current equally in England and in Ireland and the penny of either realm should be placed in his treasuries without distinction. So while *monetam nostram* might mean pennies on the English standard, both Irish and English, it would be natural to read *monetam nostram Hiberniae . . . et non aliam* as John's earlier coinage on the Irish standard.

In the foregoing remarks I have not set out to press the case of the alternative suggestions which I have made, only to show that in a number of cases the evidence readily admits of interpretations other than those which Mr. Dolley has placed upon it. He would, I know, expect the book to be judged by his own exacting standards and it would not be doing it justice to do otherwise. For this book will undoubtedly further promote the discussion of Irish numismatics and we may hope that its author will be able to solve many of the problems which he himself has often been the first to recognize. It is an important and stimulating as well as an attractive and entertaining book and, for all my reservations on points of detail, one which serves an immediate and neglected purpose in a most effective way. It is an essential item for even the most basic library of British numismatics.

I. S.

From Beads to Banknotes, the story of Money in New Zealand. By R. P. HARGREAVES. John McIndoe, Dunedin, \$5.40.

THIS book can be described as a short economic history, as well as a numismatic history, of New Zealand. Students of the economic history of the British coinage will be familiar with the various causes of the shortage of coins in Britain from the thirteenth century to the great recoinage of 1816. In New Zealand the effects were much the same, and they were compressed into a period of not much more than a century. There was the same shortage of coins, the operation of Gresham's Law, the introduction of tokens, and the same frequent, though illegal, use of foreign coins. In England, the troubles were largely due to a bi-metallic standard for our coinage. In New Zealand, they seem due to a *laissez-faire* attitude on the part of the British and later the New Zealand Governments; and also to the great distance of New Zealand from Britain.

The economic situation in New Zealand during the nineteenth century was most complex. All coins were in very short supply, British coins were supplemented by foreign coins, many being brought in by foreign whaling vessels. Paper

money was in constant use, being issued not only by banks, but also by private individuals. Some of these latter notes were of very low denominations, even of one penny, and many were not redeemable by the issuers. Copper tokens were parallel to those issued in Britain during the late eighteenth and early nineteenth centuries. However, some tokens were imported from Australia, and one, the ubiquitous 'Professor Holloway' token, from Britain. All this is a difficult story to tell, but Dr. Hargreaves has performed his task very well, and not without a sense of humour unusual in numismatic books. He mentions a trader who issued sixpenny notes, which were redeemable, five shillings' worth at the time, for Government Debentures, or in 'my celebrated ANTIPODEAN GINGER BEER, well up, but like Governor Fitzroy's head, rather weak!'

The British coins of Victoria, Edward VII, George V, and the first bronze coinage of George VI are described, and this is perfectly correct, as these coins were legal tender in New Zealand. It is most interesting to have what might be called the 'Colonial' attitude to our coins.

Two important influences on New Zealand currency are mentioned by the author. One is the influence of Maori culture on the design of the coins, banknotes, and tokens. Considering the broadminded and tolerant attitude shown to the Maoris, this is not surprising. Secondly, there was the influence of Australia. At first, this depended to some extent on the relative fortunes of the gold fields in the two countries. Australian coins had always circulated in New Zealand, though without legal sanction. By 1930 the proportion of Australian coins in New Zealand was about one-third. It was economic difficulties caused by the devaluation of the New Zealand and Australian pounds that caused the introduction of a New Zealand coinage in 1934. It seems strange that in a progressive country like New Zealand, ahead of Great Britain in many respects, there was no national desire for a national coinage. This well-written book can be recommended to all those who are interested in the coinage and currency of our Colonies and Commonwealth.

W. S.

PUBLICATIONS NOTICED, AND ACCESSIONS TO THE LIBRARY, 1972

General

*An index to 'Cunobelin', the yearbook of the British Association of Numismatic Societies, 1954-1969, compiled by JOHN WALKER. [Leeds (c/o Miss E. J. E. Pirie, City Museum): the Association, 1972]. 6 pp. It was finally decided in 1972 to terminate publication of 'Cunobelin'.

*George Petrie and a century of Irish numismatics. MICHAEL DOLLEY. In *Proceedings of the Royal Irish Academy*, section C, 72 (8), 1972, pp. 165-93, plate IV. (Aspects of George Petrie, III) 'The best of all memorials to Petrie is in fact the work of the last century, . . . and the rest of this essay will be given up to a review of its broad outlines', p. 174.

*Collectionneurs et collections numismatiques: monnaies, médailles et jetons: [catalogue d'une exposition à l'Hôtel de la Monnaie, Paris, mai-septembre 1968, organisée par le Cabinet des Médailles de la Bibliothèque Nationale, la Société Française de Numismatique, et l'Administration des Monnaies et Médailles]. [1968]. xxxii, 360 pp., map, illus. Includes GAY VAN DER MEER, 'Peiresc numismate', pp. 7-13, illus.; J. D. A. THOMPSON, 'Les grands collectionneurs anglais vus à travers les médailles (de 1600 à nos jours)', pp. 35-46.

The Departments: Coins and Medals. G. K. JENKINS. In *Treasures of the British Museum*, edited and introduced by Sir Frank Francis. London: Thames & Hudson, 1971 (The World of Art library: galleries), pp. 29-51.

*The Heberden Coin Room: origin and development. C. M. KRAAY and C. H. V. SUTHERLAND. Ashmolean Museum, 1972. [2], 17 pp. £0.10. 'Epilogue', 1 p., as insert. Published on the occasion of the half-century of its public opening, 24 October 1972.

*Methods of chemical and metallurgical investigation of ancient coinage: a symposium held by the Royal Numismatic Society at Burlington House, London, on 9-11 December 1970; edited by E. T. Hall and D. M. Metcalf; London: Royal Numismatic Society, 1972. viii, 448 pp., XX plates (Special publication no. 8). £4.50 (pre-publication).

*Analyses of the metal contents of medieval coins. D. M. METCALF. In *Methods of chemical and metallurgical investigation* . . . 1972, pp. 383-434. A bibliographical survey.

Silver stocks and losses in ancient and medieval times. C. C. PATTERSON. In *Economic History Review*, 2nd series, 25 (2), May 1972, pp. 205-35. A much-shortened version was published as 'Dwindling stocks of silver, and their relevance to studies of the metal contents of silver coinage', in *Methods of chemical and metallurgical investigation* . . . 1972, pp. 149-52.

Celtic

British potin coins: a review. DEREK F. ALLEN. In *The Iron Age and its hill-forts: papers presented to Sir Mortimer Wheeler* . . . , edited by David Hill and Margaret Jesson. 1971 (University of Southampton. Monograph series, no. 1), pp. 127-48, plates 1-6.

The coins of the Iceni. DEREK F. ALLEN. In *Britannia* (Society for the Promotion of Roman Studies), 1, 1970, pp. 1-33.

Roman

The Ramsgate coin-hoard. RALPH MERRIFIELD. In *Kent Archaeological Review*, 21, 1970, p. 2. Hadrian to Postumus.

Late Roman coinage in south west Britain. SUSAN M. PEARCE. In *Report and Transactions, Devonshire Association for the Advancement of Science, Literature, and Art*, 102, 1970, pp. 19-33.

A seventh-century coin-pendant from Bacton, Norfolk, and its ornament. GEORGE SPEKE. In *Medieval Archaeology*, 14, 1970, pp. 1-16, illus.

Continental Europe

*The Sutton Hoo ship-burial: a handbook, by RUPERT BRUCE-MITFORD. 2nd edn. British Museum, 1972. £2 (cloth), £1.50 (paperback). Includes 'The coins and the date of the burial', pp. 54-9, plate 27.

*Gold standards of the Merovingian coinage, A.D. 580-700. J. P. C. KENT. In *Methods of chemical and metallurgical investigation* . . .

- 1972, pp. 69–74. 'My conclusion . . . is that a good number of the Sutton Hoo coins belong to the late sixth century, but that additions continued to be made down to around 620, at latest to c. 625.'
- *Analyses of the Sutton Hoo gold coins. *Ibid.*, pp. 96–9.
- *Analyses of Merovingian coins in the British Museum. *Ibid.*, pp. 100–7, plates XII–XIV. Both give the results of specific gravity analysis by W. A. Oddy and M. J. Hughes, neutron activation analysis on the whole coin by R. F. Coleman and A. Wilson, and on streaked samples by A. A. Gordus.
- *The dating of the Sutton Hoo coins: some comments. RUPERT BRUCE-MITFORD. *Ibid.*, pp. 108–9.
- *The analysis of four hoards of Merovingian gold coins. W. A. ODDY. *Ibid.*, pp. 111–25. The Crondall, Escharen, Nietap, and Velsen hoards.
- La espada en la moneda medieval. JUAN EDUARDO CIRLOT. In *Gladius* (Jaraiz de la Vera), 8, 1969, pp. 17–22, illus. The form of the sword on the coins of Eric Bloodaxe, St. Peter of York, etc.
- Le trésor monétaire de Fécamp (Seine-Maritime), et le monnayage en France occidentale pendant la seconde moitié du x^e siècle. FRANÇOISE DUMAS. In *École Pratique des Hautes Études (Paris), IV^e Section: Sciences Historiques et Philologiques, Annuaire*, 1970/1, pp. 875–81, plates. (Positions des thèses de III^e cycle). Includes a (continental?) imitation of a Two Line type penny.
- *Znaleziska monet na obszarze Polski według danych archiwów Leningradzkich. V. M. POTIN. [Część I]: 1859–1889, in *Wiadomości Numizmatyczne*, 11 (zeszyt dodatkowy), 1967, pp. 1–87; summary, pp. 12–13. Część II: 1890–1913, *ibid.*, 15 (4), 1971, pp. 197–256; summary, p. 254. 'Coin hoards from the territory of Poland on the basis of data in Leningrad archives'. The following finds contained coins of the British Isles (S.—Scotland): 1859–89, no. 67: KĘDZIORKI, pow. Brzeziny, woj. łódzkie, 1873 (S., Charles I, twopence); 97: MŁAWA, m.p., woj. warszawskie, 1880 (S., Charles I, twopence); 1890–1913, no. 6: ROMANÓW, pow. Kalisz, woj. poznańskie, 1896 (Æthelred II); 20: BIERNIK, pow. Skierniewice, woj. łódzkie, 1894 (Elizabeth I, crown, 1603[?]); 39: JARZĄBKI, pow. Chmielnik, woj. kieleckie, 1911 (S., Charles I, twopence?); 56: ŁĄKOĆ, pow. Puławy, woj. lubelskie, 1910 (S., Charles I, twopence?); 80: RYBKA, pow. Wieruszów, woj. łódzkie, 1909 (S., Charles II, 'shilling'); 94: WARSZAWA III, m.w., 1912 (S., Charles I, twopence?).
- *Møntfundet fra Kirial på Djursland: 81,422 mønter deponeret o. 1365. JØRGEN STEEN JENSEN, POUL DEDENROTH-SCHOU, MOGENS and VIBEKE FENGER. In *Nordisk Numismatisk Årsskrift*, 1970, pp. 37–166 illus.; summary, pp. 166–8. The Kirial (Djursland) find (1967), deposited c. 1365, contained 2,253 British coins.
- The monetary pattern of sixteenth-century coinage. P. GRIERSON. In *Transactions of the Royal Historical Society*, 5th series, 21, 1971, pp. 45–60 (The Prothero lecture, 1970).
- *Mannheim und die Pfalz im Spiegel von Münzen und Medaillen: Erläuterungen zur Münzen-Schausammlung des Städtischen REISS-MUSEUMS, Mannheim; Katalogbearbeitung, Dr. Rudolf Haas, Dr. Inga Gesche. Mannheim: Reiss-Museum, [1972]. 58 pp., illus.
- England, Great Britain, British Isles (in general)*
- *Sylloge of Coins of the British Isles, 16: collection of Ancient British, Romano-British and English Coins formed by Mrs. Emery May Norweb of Cleveland, Ohio, U.S.A., part I: Ancient British, Romano-British, Anglo-Saxon and post-Conquest coins to 1180, by C. E. BLUNT, F. ELMORE JONES, and R. P. MACK. London: Spink, 1971. ix, 50, 85–8 pp., XVII plates. £4.
- *Sylloge of Coins of the British Isles, 18. Royal Collection of Coins and Medals, National Museum, Copenhagen, part IV: Anglo-Saxon Coins from Harold I and Anglo-Norman Coins, by GEORG GALSTER. London: Oxford University Press and Spink for the British Academy and the Carlsberg Foundation, 1972. xv, 116 pp., 54 plates. £6.60.
- *Catalogue of the Bridgewater House Collection of Coins, formed in the eighteenth century by the Earls of Bridgewater . . . SOTHEBY & Co., 15, 16 June 1972. [76] pp., [30] plates. Stephen to George III.
- Coins from the Doncaster area. M. J. DOLBY. In *Yorkshire Archaeological Journal*, 42 (167), 1969, pp. 251–2. Roman to Elizabeth I.

The Bedford mint. F. W. KUHLCHE. In *Bedfordshire Magazine*, 13, Spring 1972, pp. 167-71.

*The Bristol mint: an historical outline. L. V. GRINSELL. Bristol: Historical Association, Bristol Branch, 1972. [2], 24 pp., IV plates (Local history pamphlets, 30). £0.30. 'An historically slanted version of the introduction to the Bristol section of the Bristol/Gloucester volume of the *Sylloge of Coins of the British Isles*.'

Anglo-Saxon

*Anglo-Saxon England, I, edited by Peter Clemoes . . . [and others]. Cambridge: University Press, 1972. xii, 332 pp., VIII plates. £6.50. 'Bibliography for 1971', pp. 309-32.

Another early Saxon coin from Shakenoak. D. R. WALKER. In *Oxoniensis*, 35, 1970, pp. 106-7.

*Some analyses of Anglo-Saxon and associated oriental silver coinage. H. MCKERRELL and R. B. K. STEVENSON. In *Methods of chemical and metallurgical investigation* . . . 1972, pp. 195-209. Coins published in *Sylloge of Coins of the British Isles*, 6 (Edinburgh I).

Some single finds of tenth- and eleventh-century English coins from Wales. M. DOLLEY and J. K. KNIGHT. In *Archaeologia Cambrensis*, 119, 1970, pp. 75-82, illus.

*A thousand years of the English kingdom. ROBERT SEAMAN. In *London Numismatic Club News Letter*, 5 (17), [September 1972], pp. 241-3. Argues that the Kingdom of England has been in continuous existence since 972 or 973.

*National Art-Collections Fund Annual Report, 68th, 1971. 1972. '2425: Silver penny of King Edgar, from the Gloucester Mint . . . Weight, 25.6 grs.', pp. 27-8. Moneyer Wynsige. Fourth known specimen, bought by Gloucester City Museum.

*Personal names on the coinage of Edgar. OLOF VON FEILITZEN and CHRISTOPHER BLUNT. In *England before the Conquest: Studies in primary sources presented to Dorothy Whitelock*, edited by Peter Clemoes and Kathleen Hughes. Cambridge: University Press, 1971, pp. 183-214. Lists the moneyers' names and the forms in which they occur, with the type and the source of each form cited.

*The nummular brooch from Sulgrave. MICHAEL DOLLEY. *Ibid.*, pp. 333-49, plate VIII. The

iconography of the *Agnus Dei* on a brooch found at Sulgrave, Northants., in 1968, on the coinage type of Æthelred II (with the arguments for dating it to 1009), and in other representations; the revival of emphasis on the theology of John 1: 29-34 in the early eleventh century; other English nummular brooches (ones that give the impression of a mounted coin); a proposition that gold had ceased to be used for personal ornament by the tenth century, and silver a generation after Edgar's reform of the coinage.

England (1066-1707)

*The Durham mint. R. J. SEAMAN. In *London Numismatic Club News Letter*, 5 (15), March 1972, pp. 205-10.

An English halfpenny of Edward I from Cronk ny Merti. MICHAEL DOLLEY. In *Manx Museum Journal*, 7, 1971, pp. 175-6.

*Catalogue of the Gordon V. Doubleday collection of coins of Edward III (1327 to 1377). GLENDINING & CO., 7 and 8 June 1972. 78 pp., XXV plates.

Korabel'niki na Rusi. V. M. POTIN. In *Numizmatika i Epigrafika*, 8, 1970, pp. 101-7. Russian finds of English nobles and royals, fifteenth-sixteenth centuries.

Currency and the economy in mid-Tudor England, by C. E. CHALLIS. In *Economic History Review*, 2nd series, 25 (2), May 1972, pp. 313-22. (Essays in bibliography and criticism, LXXII.) An essay-review of J. D. Gould, *The Great Debasement* (1970).

Great Britain (1707+)

The Bank of England and earlier proposals for a decimal coinage. In *Bank of England Quarterly Bulletin*, 10 (4), 1970, pp. 454-8.

The English money stock, 1834-1844. D. K. ADIE. In *Explorations in Economic History*, 9 (2), 1971.

Trace metal content of selected English pennies. PAUL W. HARDY. In *Report of the Australian Numismatic Society*, October 1971, pp. 50-3. Analysis of five twentieth-century pennies by emission spectrography.

Ireland

*Numismatic Society of Ireland Occasional Papers, nos. 10-14, January 1970. Contents: MICHAEL DOLLEY, 'The harp on Anglo-Irish

coins: a preliminary exposition', pp. 1-10, plates I-II; MICHAEL DOLLEY and STUART N. LANE, 'A parcel of Three-Crown groats probably from a find of 1838 [Co. Meath]', pp. 11-14, plate III; GERARD BRADY and MICHAEL DOLLEY, 'A parcel of Irish "white money" from (?) Co. Tipperary', pp. 15-19, plate III; W. A. SEABY, 'Forgery of John masle farthing', pp. 20-3, plate IV; W. A. SEABY and E. M. TORRENS, 'Some coins from West Tyrone', pp. 24-5, plate IV.

The medieval coin-hoards of Thomond. MICHAEL DOLLEY. In *North Munster Antiquarian Journal*, 12, 1969, pp. 23-34. The area comprises the modern counties of Clare, Limerick, and Tipperary.

*A critical and unpublished Hiberno-Norse penny. MICHAEL DOLLEY. In *Coins & Antiquities Ltd. [Coin List]*, no. 5/6, 1972, pp. [2-3], plate. An imitation of Æthelred II's Helmet type, obv. EDELRED, rev. GIO DRIC MNO DYFL, from the same obv. die as two coins in Stockholm with an 'English' mint-signature, FIELNID MO LNM (Hild. 1608).

A small find of Edwardian sterlings from the County Clare, by MICHAEL DOLLEY and W. A. SEABY. In *Irish Numismatics*, 5 (27), May/June 1972, pp. 107-9, illus. Barnatick find 1936, deposited c. 1285, including pennies of the Waterford mint.

A unique Hibernia halfpenny die trial dated 1723 and 1724. STANLEY I. SHERR and WILLIAM ANTON, Jr. In *Colonial Newsletter* (Huntsville, Alabama), 11 (1), January 1972, pp. 345-7.

British Commonwealth and Empire

Coin hoards from Orissa. HARI KISHORE PRASAD. In *Indian Numismatic Chronicle*, 6 (2), 1968, pp. 63-71; 7, 1969, pp. 78-82. Include coins of British India.

Tokens

Viking/medieval Dublin: excavations by the National Museum of Ireland. BREANDÁN Ó RÍORDÁIN. In *Ireland of the Welcomes*, 20 (6), March/April 1972, pp. 15-21, cover. Includes coloured illustrations of the pewter

tokens from Winetavern Street (see Spink's *Numismatic Circular*, 79 (12), December 1971, pp. 446-8).

A watchmaker's token. CLIVE OSBORNE. In *Antiquarian Horology*, 7 (7), June 1972, p. 628, illus. Maldon: W. Draper.

*Catalogue of Ulster tokens, tickets, vouchers, checks, passes etc. (mostly dating from the mid-to late-nineteenth century and the early part of the twentieth century), by W. A. SEABY. In *Ulster Journal of Archaeology*, 34, 1971, pp. 96-106, plates XIV-XIX.

A bond for issuers of Youghal tokens. W. A. SEABY. In *Journal of the Royal Society of Antiquaries of Ireland*, 101, 1971, pp. 161-3.

A unique token of Palestine. S. MATALON. In *International Bank Note Society Quarterly Magazine*, 11 (3), March 1972, pp. 155-6.

Paper Money

The issue of paper money in the American colonies, 1720-1774. R. W. WEISS. In *Journal of Economic History*, December 1970.

Robert Owen labour notes. F. PHILIPSON. In *International Bank Note Society Quarterly Magazine*, 11 (3), March 1972, pp. 177-9.

Medals, Badges

*Commemorative medals: a medallic history of Britain from Tudor times to the present day. J. R. S. WHITING. Newton Abbot: David & Charles, 1972, 236 pp., illus. £3.25.

The age of Charles I: painting in England, 1620-1649. OLIVER MILLAR. London: Tate Gallery, 1972. 133 pp., illus. £2 (cloth). 'Portrait medals', pp. 129-30.

*The works asterisked have been added to the library by donation, exchange, or purchase. Also acknowledged with gratitude are those donations which would have been out of place in this list. Other publications noticed are contributions to periodicals and other collections of essays, but exclude, in addition to this *Journal*, *Coins*, the *Numismatic Chronicle*, *Spink's Numismatic Circular*, and *Seaby's Coin and Medal Bulletin*.

PROCEEDINGS OF THE BRITISH NUMISMATIC SOCIETY, 1972

(For Officers and Council for 1972 see vol. XL, p. 188)

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 25 January, Mr. Rigold, President, in the chair, the President announced the deaths of Lady Stenton, and of Dr. E. A. Johnstone, a member since 1944. The President also announced that our member Dr. Robinson had received a Knighthood in the New Year's Honours List. Mr. Christopher Heal Bennett, and Major-General E. S. Cole were elected to Ordinary Membership. Mr. Chown, Major-General Cole, and Mr. Garside were admitted to Ordinary Membership. Mr. Blunt read a paper on the Sevington, North Wiltshire hoard, found in 1834. Mrs. Murray gave a short account of the Mauchline (Ayrshire) hoard. Miss Archibald read a short paper on the Willesborough (near Ashford) hoard, found in 1970.

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 22 February, Mr. Rigold, President, in the chair, Mr. J. F. Pritchard was elected to Ordinary Membership, and Mr. Alexander M. Marks and Mr. Jonathan J. Marks were elected to Junior Membership. Mr. Brand read a paper on Kentish Hop Tokens.

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 28 March, Mr. Rigold, President, in the chair, Mr. G. Berry, Miss J. I. Vecchi, Mr. R. E. Vecchi, The Reference Department, The Library, Chertsey, The Library, The Polytechnic, Queensgate, Huddersfield, and the National Lending Library for Science and Technology, Walton, Boston Spa, Yorkshire were elected to Ordinary Membership. The meeting was devoted to a general discussion and exhibits relating to the period 1816 to 1971.

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 25 April, Mr. Rigold, President, in the chair, Mr. W. T. Cowley, Mr. W. A. D. Freeman, and Mr. A. J. H. Gunstone were elected to Ordinary Membership. Mr. G. Berry was admitted to Ordinary Membership. A joint paper entitled 'English Pewter Tokens of the 13th Century', by Mr. W. A. Seaby and Mr. Michael Dolley was read by Mr. Seaby.

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 23 May, Mr. Rigold, President, in the chair, Mr. Ivor Raleigh and Mr. Christopher John Wood were elected to Ordinary Membership, and Mr. Peter Evans was elected to Junior Membership. The President presented the Sanford Saltus Medal for 1971 to Mr. Ian Stewart. Mr. Edmunds read a paper entitled 'English Numismatics before 1836'.

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 27 June, Mr. Rigold, President, in the chair, the President announced the death of our Royal Member The Duke of Windsor. Mr. George B. Alden, Mr. William Buick Ferguson, Mr. Christopher J. Martin, and Mr. John Richard Wallace were elected to Ordinary Membership. Mr. Thompson read a paper entitled "'Farthing-Maker in the Tower'", the signed work of David Ramage (died 1662).

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 26 September, Mr. Rigold, President, in the chair, Mr. H. J. Bamforth, Mr. A. Jarvis, and Dr. Niels Lund were elected to Ordinary Membership. Mr. Dolley read a paper entitled 'The First Coinages in Ireland, and the Chronology of the Second Hand and Crux types of Ethelred II'.

At an Ordinary Meeting held at the Warburg Institute on Tuesday, 24 October, Mr. Rigold, President, in the chair, Dr. Christopher Challis, Mr. William G. L. Chee, Mr. W. P. White, and the Kyoyobu Library, University of Kobe, Japan were elected to Ordinary Membership. Mr. Seaman read a paper entitled 'The First Issue of Stephen', and Mr. Stewart read a paper entitled 'Stephanus R'.

At the Anniversary Meeting held at the Warburg Institute on Tuesday, 28 November, Mr. Rigold, President, in the chair, Mr. J. L. Garwood, Dr. John Knowles, The Numismatic Society, Kingston-upon-Thames, and The Alderman Library, University of Virginia, Charlottesville, Virginia, were elected to Ordinary Membership. Mr. West, Dr. Challis, and Mr. Moore were admitted to Ordinary Membership.

The following Officers and Council were elected for 1973:

President: S. E. Rigold, M.A., F.S.A.

Vice-Presidents: D. F. Allen, C.B., M.A., F.B.A., F.S.A.; C. E. Blunt, O.B.E., F.B.A., F.S.A.; G. V. Doubleday; H. H. King, M.A.; H. Schneider; E. J. Winstanley, L.D.S.

Director: B. H. I. H. Stewart, R.D., M.A., F.S.A., F.S.A. Scot.

Treasurer: Clifford H. Allen, F.C.A.

Secretary: W. Slayter.

Librarian: R. H. Thompson, A.L.A.

Council: Miss M. M. Archibald, M.A.; J. D. Brand, F.C.A.; Mrs. M. Delmé-Radcliffe; D. R. D. Edmunds, M.A.; R. N. P. Hawkins; J. Lavertine, M.D.; Major C. W. Lister, R.A.; C. S. S. Lyon, M.A., F.S.A., F.I.A.; Mrs. J. E. L. Murray, M.B.E., M.A.; H. E. Pagan, M.A.; J. Porteous, M.A.; T. J. Robertson; D. L. F. Sealy, B.Sc.; R. J. Seaman; J. Weibel.

Mr. Rigold delivered his Presidential Address.

EXHIBITIONS

January

By Mr. Blunt

A fragment of a penny of Æthelwulf, King of Wessex, 839–58. The obverse bears a head in the style of coins of the contemporary King of Mercia, Berhtwulf: the reverse a cross with two arms moline. *BMC* type XV.

Only the second half of the moneyer's name remains, . . .]HEARD, but it can be confidently reconstructed as WELHEARD, as this moneyer struck a coin (perhaps unique) with the same reverse type but with a cross pattée over a cross saltire on the obverse, instead of the head of the king (*BMC* 90). With the exception of an untraced specimen by WELH[EARD] from the Sevington hoard, the other six known specimens of *BMC* type XV are all by the moneyer Ethelhere.

By Mrs. Murray and Mr. Stewart

A selection of English and Scottish coins from the Mauchline Hoard, deposited c. 1520.

By Mr. Mitchell

Edward III coins from the collection of Mr. G. V. Doubleday.

Early Post-Treaty nobles reading FRA of Treaty style, with Treaty reverse showing both Calais group dies listed by Lawrence as with London reverses.

- | | |
|-----------|--|
| 1. Calais | } Same obverse die. The reverse die of the London die of very care-
less work. |
| 2. Calais | |
| 3. London | |
| 4. Calais | } Lawrence illustrates this coin under London (Pl. XIX/1), and Calais
(Pl. XX/1), but lists the coins wrongly in the index. |
| 5. Calais | |
| 6. London | |

February

By Mr. Brand

A typescript copy of the catalogue of Kentish Hop Tokens by the Revd. Mr. Ackworth.

March

By Mr. Brunel

Two medals, one silver, one brass, commemorating the first General Secretary of the National Society of Amalgamated Brassworkers, William John Davis, a distinguished numismatist who wrote a number of works on tokens.

By Mr. Hawkins

Two passes.

1. A reservoir pass from Greenock.
2. A shipbuilding pass, issued by the New Shipbuilding Yard, at Bow Creek, on the River Thames.

By Mr. Sealy

Modern British rarities and varieties.

1. 1888 4 shillings, 'inverted 1'.
2. 1887 6 pence, R over V; 1826 2 pence, Tritannia.
- 3 and 4. 1946 shilling, English reverse, two types.
5. 1952 Sixpence, proof; 1822 three pence, small head.
6. 1903 penny, open 3.
- 7 and 8. 1922 pennies, normal type, and type with the reverse of 1927.
- 9-12. 1908 pennies, the 4 types, No. 2 is RRR.
13. 1945 penny, double 9.
14. Mis-strike sixpence.
- 15-16. 3 pence pieces on light blanks, one with Hong Kong edge.

17-20. 1956 halfpennies, the four types.

17. 1+C Common.

18. 1+D RR.

19. 2+C RRR, less than 6 known.

20. 2+D R.

By Mr. Slayter

1. Three letters written by W. J. Andrew, one of the founders of the British Numismatic Society.

2. An early railway medal, in white metal, issued for the opening of the Liverpool to Manchester Railway in 1830.

By Mr. Stewart

Brass (?) counterfeits of 1816 shilling and sixpence. The former struck (?), the latter cast (?).

By Mr. R. H. Thompson

A Cardiff tea-dealer's ticket or token (cf. *BNJ* xxx (1960), p. 182); Neumann, iv, 1865, 24576), with farthings of 1799 and 1807-22-26-34-48-66 for comparison, and H. M. Thompson's *Cardiff* (2nd edn., 1936), plate [XXI].

Obv. J, GOLLEDGE / GROCER / bust of Chinaman to left.

Rev. N°. 1 QUEEN STREET / CARDIFF / scales above chest labelled FINE / TEA.

Diam.: 22 mm.

Die-axis: Upright.

Two specimens in the National Museum of Wales are from the same dies with the same axis, as is another in the British Museum.

The distribution of the name Golledge in a set of telephone directories for the British Isles would suggest a North Somerset origin. The piece is well made, and of similar workmanship to that of Samuel King, Dale End, dated 1838 (Batty, *Farthings*, 904; Davis, *Warwickshire*, 993), which would suggest that Golledge's was made in Birmingham c. 1840. In view of the rarity of the issuer's surname, he was perhaps the John Golledge listed in Cardiff directories of 1855 and 1858, and in the list of burgesses of 1858, as beer retailer at the Scandinavian Tavern, 2 Bute Street; the presence of other grocers at no. 3 and no. 18 Queen Street in 1855 might point to the cause of his removal.

April

By Mrs. Delmé-Radcliffe, unrecorded variants of the coinage of Edward IV.

1. Groat Type Xa I.M. Long Cross Fitchy/Sun showing the obverse I.M. Long Cross Fitchy with pellet in one, or possibly both, of the upper angles.

2. Groat Type XIII I.M. Large Annulet/Trefoil showing trefoils on cusps above crown previously noted only on a mule with Type XII reverse.

3. Groat Mule XIV/XII I.M. Small Annulet/Short Cross Fitchy. Previously unknown, although a reverse mule XII/XIV has been recorded.

4. Canterbury Half-Groat Type V I.M. Pall/Pall showing trefoils at neck (not recorded)—usually quatrefoils, or nothing.
5. Canterbury Half-Groat Type VIb/VII I.M. Pall/—showing the obverse I.M. struck over Sun.
6. Canterbury Half-Groat I.M. Pall/—. True Ecclesiastical Type VII, previously on record only as a mule VI/VII or VII/VI.
7. York Penny Type XIV I.M. Annulet. No marks on obverse, no quatrefoil on reverse. An unrecorded obverse of this rare coin.

By Mr. Davis, on behalf of Mr. Osment, Chairman of Reading Coin Club.

A lead token, thirteenth century (?), found at Henley-on-Thames.

By Mr. J. D. Brand, on behalf of Maidstone Museum.

Three thirteenth-century tokens of the 'London Wall' type.

By Mr. W. A. Seaby, on behalf of the Ulster Museum, Belfast.

Eighteen of the Winetavern Street, Dublin, thirteenth-century Pewter Tokens, showing all the designs discovered.

By Mrs. Bussell

Thirty Lead Tokens.

By Mr. Rigold

A. Casts of a lead token (?), from St. Mary Port, Bristol.

B. A pewter token from Greyfriars, Boston, Lincs., of the same series as those described by Mr. Seaby.

May

By Mrs. Delmé-Radcliffe

Edward IV first reign halfpenny, Ecclesiastical Issue. I.M. Pall, Trefoils at neck, Trefoil stops, no knot on breast, ? Spur under CAN. Obverse legend EDWARD'.DI'.GRA.'. REX, reverse legend CIVITAS CANTOR

By Mr. Derek Allen

Two original drawings on vellum by Thomas Simon, of his Petition Crown.

By Mr. Clayton

Three medals of the antiquaries William Camden and Martin Folkes.

By Mr. Edmunds, in illustration of his paper.

Several important numismatic books. Also a number of numismatic documents and letters, of which the most important was a letter written by John Evelyn.

By Mr. Sealy

A set of new Maltese decimal coins.

June

By Mr. Thompson, in illustration of his paper.

I.

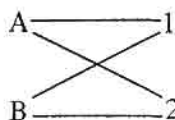
1-6. Bristol Farthings, 1660 (BW Glos. 17). Note mullet initial marks.

1. *Obv.* A (THE ARMES OF BRISTOLL), *Rev.* 1 (A BRISTOLL FARTHING).
2. *Obv.* B, *Rev.* 1.
3. *Obv.* C, *Rev.* 2.
4. *Obv.* C, note flaws below H, (ME)S, *Rev.* 3.
5. *Obv.* D, note flaw below O(LL), *Rev.* 1.
6. *Obv.* D, *Rev.* 3.



7-19. Gloucester Farthings, 1657 [-62]. (BW Glos. 77-9). Note mullet initial marks; signature .R. below G on reverses 1, 2, 4 (also 5), below c on reverses 6 (an extraordinary error die with G punched in upside down) and 7 (copied from the last?); no signature on reverses 3, 8, 9. A complete set of the die-pairings, with the exception of *Obv.* D, *Rev.* 5.

7. *Obv.* A (FOR NECESSARY CHANGE), *Rev.* 1 (LUKE NOURSE MAIOR) [1657?]
8. *Obv.* A, *Rev.* 2.
9. *Obv.* B, *Rev.* 1.
10. *Obv.* B, *Rev.* 2.
11. *Obv.* B, *Rev.* 3.
12. *Obv.* C, *Rev.* 4.
13. *Obv.* D, *Rev.* 6.
14. *Obv.* D, *Rev.* 7.
15. *Obv.* E, *Rev.* 7. [May 1662?]
16. *Obv.* F, *Rev.* 7.
17. *Obv.* G, *Rev.* 7.
18. *Obv.* H, *Rev.* 8. [June 1662?]
19. *Obv.* H, *Rev.* 9.



II.

1-2. Bristol Farthings, undated [1651?] (BW Glos. 11). Attributed to Ramage by H. W. Henfrey. No. 2 provides a second reverse die.

3-8. Bristol Farthings, 1652 (BW Glos. 12). Note signature .R. below date; coarse toothed beading on Nos. 3-4; different punch for ship and castle on No. 3; segment cut from No. 8 along arc of circle the same size as another blank; mullett initial mark.

9-14. Bristol Farthings, 1662 (BW Glos. 18-19). Note signature R below date, except on No. 14; rosette or cinquefoil initial mark; a fleur-de-lis above the C B on No. 9 (and is there an R also below the ship and castle ??); the different die-axes of Nos. 11-12, which are die-duplicates.

15. Mayor of Oxford tokens, 1652 (BW Oxon. 111). Note signature .R. below date; legends continuous from side bearing arms to side bearing initials.

16. Tower Street: Frying Pan: S., R. & C., token 1657 (BW Lond. —). Note .R. below the initials. Found at Stony Stratford, February 1972. Per Mr. D.A. Chipperfield.
17. Reading: George and Dragon: Taylor, William and M., token 1658 (BW Berks. 118). Note R below the initials.
18. Broad Street: White Horse: B., E. and A., token 1658 (BW Lond. 429). Note R above horse.
- 19–20. Dover: Leopoldus: D., C. and M., 1651, and F., G. and M., 1666 (BW Kent 210–11). Same obverse die.

III.

1. 'Peace or War' medal of Charles I (M.I. 134). Note signature .R. below bust.
2. Pattern farthing of the Commonwealth (Protectorate). Tooled, but hitherto unrecorded in silver. Same obverse die as Peck 387. Note signature .R. below the three pillars, and mullet i.m. By courtesy of Mr. J. Child, Newbury.
3. Pattern farthing of Cromwell (Peck 390). Obverse also occurs with a die signed .R.
4. Pattern farthing (?) of Charles II (Peck 473). Obverse (TRUTH AND PEACE) also occurs with the same signed die as No. 3.
5. Pattern farthing (?) of Charles II, 1660 (Peck 476, not illustrated). Poor condition, perhaps from having been buried? Cf. No. 6.
6. Medalet commemorating Charles I, 1660 (unknown to Peck). Same obverse die as Peck 483, same reverse die as Peck 476 (No. 5 above). Note signature R below the bust, which is a Briot punch.
7. Farthing 'token' of Charles II for Ireland. (Patent granted to Sir Thomas Armstrong 14 December 1660, recited 13 September 1661, and he died 19 November 1662.) Note R on headband of obverse crown; plumes at end of reverse legend.

September

By Mr. R. N. P. Hawkins

Counterfeit shillings of the last issue of George III.

Nos. 1 to 6 Date set (1816 to 1820), one with two widths of date. From close to regal dies.

Nos. 7 and 8 from cruder dies.

All have copper or brass cores, with thin silver coating, often entirely absent, leaving, if superficially viewed, copper strikings capable of being mistaken for patterns.

October

By Mr. Robert Seaman

Pennies of Henry I and Stephen.

1. Henry I: Type XV of London with usual lettering.
2. Stephen: Type I of London STIFNE REX with usual lettering.
3. Stephen: Type I of Hereford STIEFNE RE: same size lettering as No. 2.
4. Stephen: Type I of Winchester STIEFNE R: with larger lettering.
5. Stephen: Type I of London STIEFNE: with inner circle, small lettering.
6. Stephen: Type I of Lincoln STIEFNE with no inner circle, large lettering.
7. Stephen: Type I of Lincoln STIEFNE, no inner circle, very large lettering.

8. Stephen: Type I of Colchester STIEFNE, inner circle, very large lettering.
9. Stephen: Type II of London with usual lettering.
10. Stephen: PERERIC M, of Lincoln with usual lettering.

By Mr. D. L. F. Sealy

A Watford Type penny of Stephen, Lincoln Mint. Moneyer Siward.

By Mr. B. H. I. H. Stewart

A Stephen penny Type I, Newcastle Mint.

+WILL[]AS:

By Mr. J. D. Brand

Short Cross pennies of the moneyer STIVENE of London, showing variant spellings of the name.

1. Plaster Cast (British Museum) ESTIVENE.
2. STEVENE.
3. STIEVENE.
4. STIVEN.

By Mr. F. Elmore Jones

Two pennies of Stephen Type I.

1. Scottish Border Coinage. Carlisle—Erebald.

This unpublished coin is of interest because of the light it throws upon what Mr. Stewart has rightly called 'a coin which ought not to exist'. This coin was struck at Carlisle by the moneyer Erebald and is from the same obverse die as the famous (and unique) coin in the British Museum, of the same moneyer (Erebald) but with Edinburgh mint signature (Mack 281). It is also from the same obverse die as another unique coin of Carlisle of the moneyer Odard ex the Sheldon Find (Mack 282). The emergence of this further coin and one with this particular reverse reading seems to prove that the obverse die which struck all three coins never left the Carlisle workshop and that Mr. Stewart is absolutely right in his contention that the 'Eden' coin in Stephen's name resulted from a mix-up of the dies. Perhaps a coin of David of Scotland from the same reverse die as the Stephen coin will eventually appear to finally clinch the matter.

2. Bury St. Edmunds—Gillebert.

A coin of unusual style and seemingly not from London engraved dies.

Obv. Unusually large bust of quite good style.

Rev. Of normal type but with 'roundels' in the centre of the cross and at the end of each of the four limbs. These have the appearance of forming part of the original design and not to be superimposed after the die had been engraved as seems to have been the case with all the 'roundels' coins listed by Mack, all of which are peculiar to East Anglian mints, viz. Ipswich (7 varieties), Sudbury (1), and Bury (1). It is just possible, however, that the large single roundel in the centre of the cross on the latter may be also part of the original design. Certainly these 'roundels' must have some significance but whether they are associated with the bezants of the arms of the house of Boulogne and thus associated with Queen Matilda must remain an open question.

November

By Mr. R. A. Merson

1. Anglo-Gallic. Denier of Richard as Duke of Aquitaine. Hewlett Type 1. Obverse +/RICA/RDVS/, Reverse variant +AQVTANIE instead of AQVVITANIE. This variety was not present in the 1533 deniers in the Guitinières hoard (*Revue Numismatique* 1969).

2-3. Anglo-Gallic. Denier of Poitou in the name of Richard. Hewlett Types 9 and 10 (?), below obverse legend 'straight line terminating in a point to left' or '—right' (in fact simply a wedge). These two varieties do not appear to be common.

4. Brittany. Jean IV de Montfort (1345-1399). First Period, 1345-64. Gros Tournois, Vannes mint. Differs from Poey d'Avant I 597-9 in several respects. Note -O- below châtel, interior of châtel, and annulet below Dux on reverse.

5-7. Three Blancs from the second period of the reign (1364-99).

5. Nantes.

6. Nantes (perhaps a forgery).

7. Rennes.

ADDRESS BY STUART EBORALL RIGOLD,
F.S.A., F.R.Hist.S., F.R.S.A.

PRESIDENT OF THE BRITISH NUMISMATIC SOCIETY

Delivered at the Anniversary Meeting, 28 November 1972

REVIEW OF THE YEAR

AGAIN I present my report on the state of the Society as a co-operative effort, with sincere thanks to those officers and members of Council who have helped me put it together. The officers are well tried; the new editorial consortium has had a year's trial and is proving its capability.

Before going into figures, I should like to pay a tribute to Lady Stenton, who died just after our last Anniversary meeting. Others knew her better than I did and can better judge the extent of her contribution to scholarship, though I am familiar with her work as editor to the Pipe Roll Society. Let me then commemorate her as a pupil and in every sense a fellow worker of her husband and continuator of his work, in the blessed and enviable company of the long-lived relict of Joseph Wright of the *English Dialect Dictionary*, of Alice Stopford Green, or even of Clara Schumann. The only other death in the Society is that of Mr. Brazenor of Brighton Museum—incidentally, a collection with several important local finds. He had been a member for twenty-four years.

Our numbers continue to increase. For the first time in our history we have passed the 500 mark—350 ordinary members, 15 junior, and 138 institutional. Some would cheer instinctively, but I do not share this adulation of 'growth' as a good in itself. I accept that it is necessary to the survival of a publishing society, that the inflation of printing costs, epicyclic to ordinary inflation, must be offset by the progressive reduction per copy as one moves away from 'first-copy' costs, even though the dividend from any endowments is decreased with more recipients. Yet bulk, as all palaeontologists know, is generally inimical to survival. There is a more organic growth in the life of every society, reflected in the motives that make people join, which are not necessarily the 'purposes' set down in the rules. Societies take root, grow fast, find their true nature or *métier*, that is, they reach maturity, and, if they are wise, they stay there, not for half a century, like an individual, but, with care, for several. We came of age long ago and show no sign of senility, but must beware of straining ourselves by overgrowth at the wrong time and mistaking our *métier* in the process. Some mature archaeological societies are being deliberately challenged to keep up with adolescent ones, if necessary to self-destruction. Let this be borne in mind when I say that, while our finances seem sound, in the terms of Diocletian or of Edward VI rather than of Trajan or of Edward I, we must conserve our true function, as expressed in the standard of our publication and our other activities. Council will, in the near future, be looking closely at the accounts for the year just ended in the context of this unstable state of values, and some time in the next twelve months will have to consider raising the nominal sum of the annual

subscription. It is common knowledge that our sister society has just almost doubled theirs. Let me reassure you: we are not thinking in those terms. They would defeat our growth, even maintenance, of membership and of service, and probably of income too. Our commitments are our own; we do not underwrite unprofitable monographs of limited appeal, and we do not, like some American societies, have to fortify ourselves against a harsh world by large assets. Beside the good tradition of co-operating with other societies without becoming 'passengers', societies in Britain and France still have the incalculable support of other established institutions. We are determined neither to debase our standards nor to diminish the services we offer to all qualified and willing comers, and therefore to keep our subscription within toleration.

The 'year's work' is hardly a meaningful term in a slow-moving subject such as ours (and our sister's, where it covers our interests). The year's programme shows something of the ruling interests of our contemporaries. Together we have offered two original contributions in the great home-field of early medieval coinage, three on tokens and allied subjects, two on medieval monetary economics, a paper of special archaeological interest (Mr. Dolley and Mr. Seaby's paper on the Irish find of pewter tokens), beside one on the Roman Netherlands not irrelevant to Britain, and one on the *parentalia* of English numismatics.

It might be better to speak of the 'year's works': some societies have adopted this method of consolidating a plethora of reviews. I can only point to the most important: the report of the symposium in December 1970, *Methods of Chemical and Metallurgical Investigation of Ancient Coinage*; contributions by Mr. Blunt and Mr. Dolley to the *Festschrift* for Professor Whitelock, and Mr. Dolley's *Medieval Anglo-Irish Coinage*, a Newtonian light on what had hitherto been murky for so long; in the *Sylloge* yet another part of Copenhagen, and the selective, but very useful Norweb collection; *The Bristol Mint*, by L. V. Grinsell, better known as a prehistorian, with all the precision and acumen this implies; Françoise Dumas, *Le trésor de Fécamp, et le monnayage en Francie occidentale pendant la 2de. moitié du Xe. siècle*, for which the second half of the title shows the scale of the work, a large volume built round one very important hoard, the first of a series of monographs initiated by the French Ministry of Education, an example that might be followed here. The English content is small but critical for dating: it is a pity that, on the map, Lymne is put at Lyme Regis (!). Among catalogues Mr. Doubleday's Edward III collection must be mentioned: we have used one of the Society's funds to supplement gaps in illustrations.

Finally, the customary interim survey of hoards: it begins in Hertfordshire with a pre-Roman hoard from Skeleton Green, Puckeridge (40 coins) and one of Tetrarchic *folles* from Chipperfield (62 coins). From Eriswell, Suffolk, came a mixed hoard of Roman and Icenian silver (72 coins and 255 coins). The early medieval finds are important: 11 coins of William I, type I, from Norwich; a great hoard (?780 coins) of Henry I to type XV, but with an interrupted run of earlier types, from Lincoln; over 1,000 coins of Stephen, type I, with 'irregulars', from Prestwich, Manchester. There is a small, for the species (41 coins), Edwardian sterling hoard from King's Lynn, and three of the usual late hammered hoards (sixteenth-seventeenth century), from Gloucester, Lighthorne, near Warwick, and Broadwoodwidger, Devon. More interestingly, a Scandinavian wreck produced Swedish copper blanks for Caroline farthings and some English coins of the same period. The only recent (pre-1914) gold find was in Richmond Park.

CONCEPTS OF STYLE IN COINAGE

If I spend much of this discourse recalling and rationalizing a *damnosa hereditas* of the nineteenth century, it would be just to begin by calling to mind the contributions of those two eminent late-Victorians who were with us until recently, Helen Farquhar and Dr. F. Parkes Weber. It is not without significance that we meet in the Warburg Institute and that the whole procedure and direction of art-historical studies today is different from theirs and different, too, from that of Barclay Head, who furnished those stylistic periods in Greek numismatics still served up cold today.¹ His *hereditas*, tidy and memorable, is still pervasive. I do not so much wish to dispel it, as to set it in its historical context and to point out that the word 'style' has been used with different, even antithetical, meanings, all of which may have facilitated genuine insights into works of art and craft, yet between which even recent speakers have glided without being aware of it. I am not arguing about forms of words but trying to disentangle muddled usage which leads to muddled thinking. I am also adopting a pragmatic and positivistic standpoint: I am looking for those definitions of 'style' which yield, or have yielded, the most significant results, and I recognize that the existence of a single word-form may produce not only confusions but fruitful cross-fertilizations between the senses. I shall even try a dialectical approach and seek a synthesis combining the strong points of divergent usages.

Art-history is adventitious among the humanities, and 'style', like many of its terms, is borrowed from letters. In that context it is possible that the manner or 'pen' of an individual may have priority over an agreed and general style, but when, in the eighteenth century, we hear of 'styles' in art and construction it is nearly always in the general, not the particular, sense, even though, as Dr. Sutherland has pleaded,² general styles may be largely determined by individual master-hands and master-minds. This obvious distinction between a general style and an individual execution is often ignored. It is possible that Head thought that the latter counted for little, as indeed it does when the discipline of apprenticeship is as effective as in the Chinese imperial potteries. Even in such circumstances, as Head's immediate disciples knew, style as an instrument for dating or otherwise classifying is not only subjective but mathematically imprecise. No date so argued can be better than a central point with a wide deviation, unless some patent innovation provides a *terminus post quem*.

For all that, a pathetic faith in Head and his message remains—his myth of progress and decline, and his details too. When Dr. Kraay argued that Syracusan 'Demareteion' was fifteen years later than commonly supposed I heard a cry of despair that 'the bottom had fallen out' of stylistic dating. The 'worst' that had happened was that one 'firm' point had been moved fifteen years along. And was fifteen years really an appreciable difference on such a scale? Yet in Head's day the message, not of course new in archaeological circles in 1874, was of wide importance. All the world now knew that the high classic style was not eternal but had arisen. It was unthinkable that the Trustees of the British Museum should refer, as they had sixty years before, to a late-archaic work as 'in the Etruscan style'.³

¹ As used in the British Museum catalogues of Greek coins, beginning with *Sicily* (1876), the various general guides to the series, and even repeated in Mr. R. A. G. Carson's *Coins* (1962).

² 'What is meant by Style in Coinage', *Amer. Num. Soc. Museum Notes*, iv (1950), pp. 1-12.

³ The sculptures from the temple of Aphaia at Aegina, as restored by Thorvaldsen.

In medieval and post-medieval numismatics we do not need such clumsy instruments for dating, and when we try them, as our Director has shown, we find them defective to the point of uselessness.¹ In fact we never try them on the scale where they might be significant, that is to show differences of the order of a century. The examples Mr. Stewart cites, clumsy, even barbarous dies, intermingled with more competent ones, need not be affected by general style at all, merely by disparate execution, or, in a special sense, 'individual style'. I say 'need not', because even children's drawings have some style of their age, as well as of the executant's mental age. What an eight-year-old draws today is not what he would have drawn in the 1920s, or in the 1870s. Neither is it a perfect specimen of the art of its age.

For the fine points of die-sequence, however, and for geographical, rather than chronological classification, the 'styles' or 'quirks' of individuals have proved their use in medieval numismatics. They are the ground of Mr. Dolley's case for an administrative subdivision in the late Old English coinage and of the strong case for more than one fleeting administrative co-ordination in the Merovingian.² In the former the differences do not reflect any general style; in the latter it would be dangerous to argue any—an Iron-age revival might be claimed in a thing so un-Roman as the *appendice-perlé* group. Individual 'style' is usually without external reference and its uses 'archaeological' in the narrowest and least humane sense, uncertain links in a completely material argument. Henceforth I shall concern myself with 'Style' in the sense that Head used it, 'general' Style (hereinafter with a capital letter), protean, subjective, but not illusory. It has the widest implications, yet, in numismatics, is only one of several descriptive factors that are often confused with it. The concept becomes clearer if these factors are given distinct names: I would suggest 'fabric', 'hand', 'transcription', and 'devolution', all of which should be distinguished from 'Style'.

'Fabric' is the shape of a coin and the consequence of all its 'processing', whereas Style is a function of the type only, and thus, immediately, of the die.

'Hand' is a convenient word for 'individual style', equally a function of the die. I would extend it to more than one worker, in so far as they cannot be readily distinguished. In my series 'B' of 'Primary sceattas' one dominant hand is recognized throughout B I and into B II (but not B III), though at some point a new die-cutter may take over. Yet at least one quite distinct hand cuts a few dies for the same mint in B I. The Scandinavian bunglers, cited by our Director, who made four different reverses for one barbarous obverse, all had different hands.³

'Transcription' (I use the musical metaphor deliberately) is the interpretation of a type or design within the limitations of fabric and hand, and like these can be criticized on grounds of workmanship rather than intention.

'Devolution' (I avoid the moral or pathological word 'degeneration') is what happens to a type through a succession of incompetent hands, the process usually seen as 'barbarization' though it occurs in civilized contexts too. I shall enlarge on this, but submit that Style belongs to the primary aspect of the type only, and evaporates under devolution.

¹ 'Style in Medieval Coinage', *NC* 1969, pp. 269–89.

² e.g. the whole, generally western, *appendice-perlé* group and several Austrasian groups, in particular that isolated by Dr. H.-U. Bauer and J. Lafaurie (for

references, *op. cit.*, in note 1). The work of the same die-cutter is better explained by distribution than by casual and itinerant employment.

³ *Op. cit.*, in note 1, pp. 269–72.

C. F. Keary, in a seminal paper,¹ not long after Head's pronouncement on Style, attempted to apply strictly organic analogies (evolution, hybridization, degeneration) to coins, and combined fabric, hand, and devolution under the heading of 'Morphology', but he said nothing about Style, which, I submit, is that element in a given type which is common to all comparable designs, not only of coins but other classes of artefact. To judge the effect of the four other factors we should compare the English coinages from that of Edward the Confessor to the 'Tealby' type of Henry II. The fabric of the later coins is much less careful than the earlier, but this is not necessarily true of the hand of the later dies. Problems of transcription become less if, as appears, the range of punches increases. Devolution hardly applies when types are changed so rapidly, except when, early in Henry's reign, the changes bring on a kind of alternating devolution. The force of Style in the earliest coins needs evaluation. A fresh and more patent Style enters late in the Confessor's reign but the final designs are better representatives of a different, late Romanesque, manner.

It will be objected that, by thus relegating these factors, I am reviving the ancient and snobbish distinction between 'fine' and 'useful' arts, yet respecting the most colloquial use of the word Style, in the sense of conscious or instinctive elegance. I am unrepentant: I would define Style as the contribution of the artist, not the hack. The more civilized the work the more Style it has: the utterly barbarous has no Style. There is a gradation, but it is not a time-scale, and in 'barbarous imitations' we can recognize the priority of the archetype and no more. M. Lafaurie made a valid point, even if he overstated its implications, when he demonstrated that very barbarous imitations of Merovingian types could follow closely on the archetype. The myth of hand and type in gradual and harmonious diminution dies hard, but it is not concerned with Style.

It might also be objected that I am confusing Style, a vague and variable attribute of artistic elegance, with Styles, the distinct idioms in which it is expressed. I reply that one presupposes the other, and that in a coin, as in any artefact, we recognize a particular style, that is particular in itself but general in its application, most easily when it has most Style in the general sense. We are quick to recognize it when art-historians have packaged and branded it; when the brand-name is settling down we are not yet quite sure. Not to go outside the British series, there are coins we would unhesitatingly call Baroque, Neo-classic (of various kinds), or Gothic-Revival. We can also detect styles not yet fully 'branded'—the applied hybrid-Gothic of the high Victorians, the fluid style we miscall Edwardian Baroque, the spare, tool-conscious style of the Arts and Crafts movement² the massive, material-conscious reply which we now view with historical detachment.³ It is easiest in the age of master-dies, when the artist is only employed at the beginning of each issue, but it is not hard to apply the same tests elsewhere. Some of these styles may be first isolated, even invented, by art-historians, but others have their manifestos from the start and are quite self-conscious. Their exponents know when they have 'arrived'.

On coins there is always some delay before a new style breaks the barrier of officialdom. I suggest that this was so also in antiquity. It is more marked on coins than on banknotes and stamps, but there are surprises. If Mucha was already rather dated when he designed Czechoslovakian notes and stamps in 1919, and Toorop stamps for Holland

¹ 'The Morphology of Coins', *NC* 1885, pp. 165-98 and 1886, pp. 41-95.

² As in the work of Kruger Gray.

³ As on the Jubilee crown of 1935.

in 1924, in the supposedly stiff and conservative Austro-Hungarian monarchy, Kolo Moser, high-priest of the Sezession, produced stamps in 1906 (for Bosnia). Advanced public buildings were commissioned from his colleagues and the Jubilee coins of 1908 are almost as bold. The coinage of Edward VII is quite modish for its time.

If we then define Style, or Styles, as a quality, or particular sets of qualities, of wide external reference and transferable from one die to another, from one issue to another or from one issuing authority to another, which the designer, be he or be he not also the die-sinker, has imparted to the type by deliberate thought or assimilated training, how can we recognize this on coins without reference to other classes of artefact? How, even then, can we be sure that the resemblance to other classes is not accidental? I would suggest three criteria: over-all balance and the controlled use of space and background; consistent treatment and internal 'organization' of all iconic components; well spaced and distinct lettering, integrated into the whole design, but not necessarily immediately legible (Muslim coinage has much to teach us here). These are applicable to all periods and all civilizations.

Head and his generation believed in the existence of distinct, general Styles, without necessarily defining the concept. They felt themselves, rightly in my opinion, in the presence of objective entities dense enough to keep a shape which has proved all-too-rigid. The attack on them has come not so much by the justifiable softening or redefinition of the demarcations between supposed styles but by questioning the various models that have been set up as expressing the essential nature of each and any individual style. To me all but one of these models seem fallible—hypostasizations that presume too much, yet may have limited usefulness in favourable circumstances. They are worth examining in turn, and testing, where possible, in the narrow field of coinage.

The first and most ancient, the extreme Classic model, posits that there is, at least as far as the West is concerned, one ideal, 'correct' style, implicit in all humane arts. There are recurrent attempts to capture or recapture it, but all else is barbarous or frivolous. Its antithesis, the extreme Romantic, or anarchistic, view is that there is no true, absolute style; therefore there are no styles—only fashions, 'gimmicks', all equally capricious, enjoyable and expendable, the classic 'style' being as barbarous and frivolous as the rest. No one could seriously defend either today, after two centuries of art-history, in coinage or anything else, though the anarchist protest is sometimes heard. Can we find a defensible synthesis, a relativist aesthetic, in which 'good of its kind' makes sense and which, on coinage, respects the three criteria that I have suggested? It is worth doing, for 'moderate conservative' notions, however much they pass by consent, are not uncontroversial and need defining. Such a model might imply that a style only arises in conditions of harmony and consent, when literature, art, and music are attuned and an artist's exposition has a willing audience. This works well in many situations: when there is a dominant philosophy, such as the High Gothic age of the scholastics (certainly the best coins of St. Louis or Edward I are unexceptionable); when tempers are low and art gracefully and lightly committed (as English coinage from Newton to the Seven Years War); within coteries, such as the Pre-Raphaelites, the Symbolists, and Vorticists (all too small to produce coinage); in *some* revolutionary situations (the hardest point of Neo-classicism produced splendid coinages in France), but more often the artistic programme of such a moment stifles Style. This is just the burden of the Romantic antithesis to our moderate-Classic thesis: programmes are so much rationalizing cant—

either they delude an age without spirit or they poison the spirit and nullify Style. A style, according to the moderate Romantics, is the expression of the *Zeitgeist*, or perhaps the *Volksgeist*: artists work in a common style because they are what they are and of their age, not because of any manifesto or expressed philosophy. A phantom of pseudo-historical verbiage is thus invented to explain a few more facts.

Again, neither of these models is adequate. Synthesizing them in moderated terms, it is useful to examine the effect of expressed sentiments or theories on artists of different history, environment, and assumptions. It is sometimes very revealing to look at artefacts we know to be contemporaneous in terms of each other—to frame one's questions, say, architecturally, and look for 'Early English' pots or 'Perpendicular' coins. It is quite another thing to assume that they share a common style, as the *Zeitgeist* proponents do. Baroque architecture and sculpture are the premiss; the idea of Baroque painting gave a precious insight; Baroque music, arguably; Baroque poetry, very doubtfully . . . and so, *ad absurdum*. Baroque coins there certainly are, but there are at least two distinct styles of them, not just two fabrics. Does this mean there are two Baroques? The universal *Gesamtstil* is a hypothesis useful only as a test, which often gives negative results. But the test is always worth applying, and coinage, of all minor arts, provides the longest range of samples for its application. It also provides the longest and most convenient range for establishing an empirical alternative to it, the model that I now propose.

I submit that a common or general style arises simply when two or more (not all) art-forms share a common idiom, and that this must have been adopted by one of them, the 'subsidiary' art, from another, the 'dominant' art. Either the practitioners of the dominant force those of the subsidiary to conform, or those of the subsidiary willingly and flatteringly imitate them. There is no need for a programme, a *Zeitgeist*, or any other third force. It is a piecemeal, often a chain, reaction. Subsidiaries become dominant over other subsidiaries, and if there is more than one dominant and they are in different styles, a hybrid results. The whole process is largely conscious and the moment of domination can often be found.

A style that passes quickly and with little alteration from one medium to another I call a 'primary' style. When a medium ceases to nourish itself on its dominant and develops in isolation along lines conditioned by its own fabric it acquires a 'secondary' style. This, too, is usually conscious. In many media the secondary soon withers and leaves the way open for a new primary. In coinage, with its premium on conservative types, the secondary is often very tenacious but ultimately dies of malnutrition. Coinage is almost always a subsidiary art and hardly ever acquires subsidiaries of its own. Late Saxon coin-jewellery is an exception. Coinage has a continuous tradition of fabric: stylistically it is reshaped at long intervals, living off secondary style between them. Revivals are common enough in many arts: the classical tradition depends on a recurrent renaissance, or re-examination of sources. Determined revivals produce new primary styles, as in the Romanesque age, the complex we call *the Renaissance*, or what most call the Neo-classic phase, but the Italians the Little Renaissance. This very seldom happened in coinage. At best, during a phase of secondary style, there is a short glance backward, not to the archetype but to fairly recent precedents, as Edgar to Alfred and Athelstan. Truly Romanizing coinages are extremely rare and usually clumsy: there is one in medieval Sicily. Despite the admiration for Roman coinage in the days of Justinian, or Geraldus Cambrensis, or Petrarch, or Memling, classicism enters coinage one motif

at a time (as the Probus head on Ethelred's *Helmet* type) and is usually borrowed from other arts. A Romanesque or Renaissance column, statue, or gem could occasionally be taken for Roman, but never a coin. Coinage is, I repeat, almost invariably a subsidiary art and my task is to find the dominant in some other medium.

The art that raised coinage to an art-form in the beginning and called numismatics into being as a branch of art-history before it became a branch of political history, was gem-engraving, the minute sculpture so highly prized throughout the Hellenic and Hellenistic age. Punch-marked coins were known in pre-Alexandrine India and pre-Han China.¹ By definition they have no Style, nor do the most elementary coins of the east-Greek world, the start of Head's series, which are simply punch-marked. Repoussé metalwork may have had occasional effect, but it is the intimate interdependence of gem-cutting and die-cutting, working on the same small scale, that kept the art of coinage so vital to the age of Augustus and never allowed the secondary style to stray far from the primary.

In the late Julio-Claudian period another dominant enters, with another primary style, that of the *tondo* or *patera*, of small relief-sculpture, used architecturally or by silver-smiths. The result was the monumental *Aes* of Nero and his successors, but it was too monumental—the discrepancy in scale was too great. Within a few generations contact was broken and a weak secondary style took over, with only a brief refreshment at the sources, including painted *tondi*, under Diocletian and Constantine, and a mere gulp in the parched fifth century. The classical tradition was tiring, the experimental idioms still unsure. What is new, or 'Byzantine', makes a very poor showing on coinage, and Justinian's is a miserable advertisement for either style—the spacing and lettering are dreadful. In short, there is no new dominant art or primary style worth speaking of. It is a case of secondary style, ever losing impetus until the eighth century, in the eastern empire as much as in the sub-Roman west. To go to its limits, in England, what style the best of the 'thrymsas' and 'primary sceattas' have is vestigially Roman. The worst are simply barbarous, with fabric but no style. Teutonic metalwork, at its vigorous peak, could have contributed something, and later did so, but was not yet allowed to at this stage.

In the eighth and ninth centuries several new primary styles arose. Unfortunately, in the west, neither they nor the coinage were co-ordinated or persistent enough to make a really strong new idiom. The first of these new styles was entirely English. Some 'secondary sceattas' and the coinage of Offa assimilated enough of the best of Germanic ornament, presumably from metalwork, to make a viable new style, and, by early medieval standards, Offa's coinage, which owes little to Rome, has all the qualifications—good spacing, good lettering, consistent design. The next is the aniconic style, or styles, of Islam and the Carolingian empire. Spacing and lettering are all, and occasionally, even in the west, they are very good. The dominant art was some form of calligraphy, but in the west the uncial or majuscule traditions were growing feeble and it came to little. This address is printed, essentially, in a Carolingian *minuscule*. The third is the style of the revived empire, based on Constantinian *Aes*, the neatest plentiful Roman coinage to hand. For once an ancient coinage provided the dominant art and at first the spacing, lettering, even the portraiture were passable, but contact broke as soon as made and a secondary style hardly appeared. This owed nothing to the new Byzantine

¹ See A.N.S. *Museum Notes*, iii (1948), pp. 145–8. These are of gold with only a fortieth part alloy. Several hoards are reported from Anhwei since 1969.

tradition, for an assured Eastern primary style had not yet appeared. It did so later in the ninth century, when the iconoclastic quarrel was settled. In the beautiful, consistent, well-lettered coinage of Leo VI and his successors, not without reflections in the west, all relics of Roman secondary style are swept away and the dominant art is the new, clean, low-relief sculpture, particularly in ivory.

The aniconic Carolingian tradition proved very tenacious. It was a secondary style, drawing little from outside, but when the spacing and lettering are well set out it rises above the barbarous. England came to share it and shows up very well in this respect, but after Edgar's reform the English coinage and some issues of the Ottonian and Saxon emperors stand outside it. We can therefore posit a new primary style or styles, parallel with the proto-Romanesque and sometimes orientalizing art of the period, but by no means entirely Byzantine, even in Germany. The spacing and lettering are passable, the inventiveness considerable, but the dominant art is hard to find. One candidate is the rising art of seal-cutting, but, like all aspects of early Romanesque art, it needs investigation. It is courtly, not popular, probably eclectic and certainly full of surprises, including portraiture.

Middle and late Romanesque style, with its new mastery of relief from seal-engraving upwards and its new domination by scaled-down architectural motifs, is another matter. All this can be seen on coins when size and fabric allow it, particularly, as Mr. Porteous has pointed out, on the bracteates of Germany. But the shallow aniconic style had put relief on coins at a disadvantage which lasted, as we shall see, not until a change in fabric but until a change in the dominant art. Throughout the Gothic period, when the coins rise above the aniconic, the dominance of seal-cutting is unmistakable but they are never allowed the parity they enjoyed in antiquity. In the thirteenth and fourteenth centuries seal-cutting at its best was superb, but the finest gold coins could only give flattened versions of it. The relationship remained the same with the new broad silver of c. 1500. Coins and seals are both stamped and their affinity is natural, but the inhibition of low relief remained.

From the fifteenth to the seventeenth centuries there is generally a discontinuity between the arts of the coin and of the medal which arises from the great difference in relief. Throughout this period, which we can still call, for short, and with endless reservations, the 'Renaissance', and include the 'Mannerist' and early Baroque phases within it, the medal is not nearly so often the dominant art as commonly supposed, nor is that of ancient coinage. The most constant and powerful dominant is the new stamped art, of printing. From the moment when that ceases just to counterfeit manuscripts, coinage, whether Gothic or Italianate, takes on a new face. Both arts are two-dimensional but skilled in illusions of relief. Coiners' letter-punches are precisely analogous to type and the spacing and forms of their legends improve hand-in-hand beyond measure. The purely inscriptional coin-types of Scandinavia, the provincial title-page effects of Charles I's Oxford issues, the fresh approach to heraldic devices and *stampe* all have close parallels in printing. The firm, linear handling of profiles, the near-frontal images of early Baroque coinage come from the line-block cutter and the engraver, and the two meet on de Passe's engraved medalets. Need I press the parallel further? The printing-press was the salvation of numismatic art, ironically, until the coining-press was finally accepted.

It is only with the late Baroque and Neo-classic phases that the art of the medal gains

unquestioned dominion over that of coinage. With improved metallurgy, with the mill and other mechanical devices, the discrepancy in relief is resolved and there is almost a recapitulation of earlier medallic art. Besides a pretty recent Italian piece, it is no accident that the first effigy of our present Queen is inspired by Pisanello. In the new issue the marriage has broken and it badly needs mending. The head, to be sure, has virtues of originality; the spacing is fairly civilized; the lettering, ill-spaced, illegible and playing no part in the design, is downright barbarous; some at least of the reverses suggest a new dominant art in that of the pseudo-military button-maker. We pass behind the dignity of the Soho mint into the thin grass-roots of Brummagem.

THE BRITISH NUMISMATIC SOCIETY

Balance Sheet as at 31 October 1971

<i>1970</i>		<i>£</i>	<i>£</i>	<i>1970</i>		<i>£</i>	<i>£</i>
27	<i>Subscriptions received in advance</i>		22·37		<i>Investments at cost</i>		
120	<i>Sundry Creditors and Outstanding Charges</i>		120·00	900	<i>£900 7% British Savings Bonds</i>		900·00
	<i>J. Sanford Saltus Medal Fund</i>			2,000	<i>£2,000 6% British Savings Bonds</i>		2,000·00
200	Capital Account		200·00				2,900·00
250	<i>Schneider Research Fund</i>		250·00	200	<i>J. Sanford Saltus Medal Fund</i>		
	<i>Journal Provisions</i>				<i>£200 7% British Savings Bonds</i>		200·00
	1970	2,400·00			<i>Schneider Research Fund</i>		
4,000	1971 (Provision towards cost)	1,950·00		250	Cash at Bank		250·00
		4,350·00		150	<i>Library at cost, less amounts written off</i>		150·00
	<i>General Purposes Fund</i>			10	<i>Furniture at cost</i>		10·37
	Balance at 31 October 1970	879·50			<i>Cash at Bankers and in Hand</i>		
879	Excess of Income over Expenditure for the year	15·11		541	Bank—Current Account	543·19	
		894·61		1,425	Bank—Deposit Account	1,783·42	
						2,326·61	
<i>£5,476</i>		<i>£5,836·98</i>		<i>£5,476</i>		<i>£5,836·98</i>	

Report of the Auditors to the Members of the British Numismatic Society

We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit. In our opinion proper books of account have been kept by the Society so far as appears from our examination of those books. We have examined the above Balance Sheet and annexed Expenditure and Income Account which are in agreement with the books of account and no credit has been taken for subscriptions in arrear. In our opinion and to the best of our information and according to the explanations given to us, the Balance Sheet gives a true and fair view of the state of the Society's affairs as at 31 October 1971, and the Expenditure and Income Account gives a true and fair view of the excess of income over expenditure for the year ended on that date.

108 Cannon Street, London, E.C. 4
18 April 1972

GILBERTS, HALLETT & EGLINGTON
Chartered Accountants
Auditors

Expenditure and Income Account for the Year ended 31 October 1971

EXPENDITURE				INCOME			
1970		£	£	1970		£	£
36	Printing and Stationery . . .		20-06	1,729	Subscriptions received for 1971	1,804-75	
40	Expenses of Meetings, Rent and Library facilities		46-69	57	Subscriptions in arrears received during year	67-55	
82	Sundry Expenses		96-06	25	Entrance Fees	27-62	
	Journal Expenses:			30	Donations	35-30	
	1969 Journal	2,106-75		266	Interest received	248-58	
	Less Previous Provisions	2,100-00		44	Sale of Publications	106-17	
			6-75	10	Buxton Prize Money	10-00	
	1970 Journal:			171	Income Tax recovered on Covenanted Subscriptions	194-70	
	Additional provision for printing and cost of plates less Donation		500-00				
	1971 Journal						
	Provision towards cost		1,950-00				
			2,456-75				
2,119	Less British Academy Grant		150-00				
			2,306-75				
10	Buxton Prize Provision		10-00				
45	Excess of Income over Expenditure carried to General Purposes Fund		15-11				
<u>£2,332</u>			<u>£2,494-67</u>	<u>£2,332</u>		<u>£2,494-67</u>	

OBITUARY: CLIFFORD HUBERT ALLEN

The death of Mr. Clifford Allen, Treasurer of the Society, was reported as this volume went to Press, and the Secretary has contributed the following appreciation of him:

Clifford Allen died on 13 March 1973, at the age of 68, after a very short illness. He joined the Society in 1957. Previously he was one of the first members of the London Coin Club, of which he was the President for several years. He did important work in building up the Club in its early years. Mr. Allen's numismatic interests lay chiefly in coins of the west-country mints, and tokens from the same area, particularly from Somerset. He was first elected to Council in 1960. As a Chartered Accountant, Mr. Allen took a keen interest in our financial affairs, and he always took a leading part in the discussions on this subject. Therefore, it is not surprising that he was elected Treasurer in 1967, and held this office until his death. Mr. Allen's professional skill, combined with his great kindness, and his constant desire to help made him an outstanding Treasurer. The statements that he presented to Council and to members at the general meeting were most lucid, and we always thought that our financial affairs were safe in his hands.

As the Secretary, I worked in close association with Mr. Allen. Liaison between the Treasurer and the Secretary is essential for the smooth running of the Society, and I can only say that he always gave me all possible assistance, and did more to help me than I could reasonably expect.

The loss of Clifford Allen will be a great blow to the Society.

WILFRID SLAYTER

LIST OF MEMBERS OF THE BRITISH NUMISMATIC SOCIETY 31 JANUARY 1973

ROYAL MEMBER

HIS MAJESTY KING GUSTAV VI OF SWEDEN

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VATICAN CITY, ROME, Biblioteca Apostolica Vaticana, Vatican, Rome.

VIENNA, AUSTRIA, Österreichische Numismatische Gesellschaft, Burgring 1, Wien, Austria.

VIRGINIA, U.S.A., Periodicals Division, Alderman Library, University of Virginia, Charlottesville, Virginia 22901, U.S.A.

WAKEFIELD, The Librarian, The County Library Headquarters, Balm Lane, Wakefield, Yorks.

WARSAW, POLAND, Polskie Towarzystwo Archaeologiczne, Zarząd Główny, ul. Jezuitska, Warszawa, Poland.

WASHINGTON, U.S.A., Continuations Unit, Order Division (7778), Library of Congress, Washington, D.C. 20540, U.S.A.

WILTSHIRE, The Librarian, County Library and Museum H.Q., Mortimer Street, Trowbridge, Wilts.

WINCHESTER, The Curator, The City Museum, The Square, Winchester, Hants.

WINCHESTER, The Librarian, Hampshire County Library, North Walls, Winchester, Hants.

WINCHESTER, Hampshire County Museum Service, Chilcomb House, Chilcomb Lane, Winchester, Hants.

YALE, U.S.A., Serials Department, Yale University Library, New Haven, Connecticut 06520, U.S.A.

YEovil, The Librarian, The Public Library and Museum, Yeovil, Somerset.

YORK, The Keeper, The Yorkshire Museum, York.

YORKSHIRE, The National Lending Library for Science and Technology, Walton, Boston Spa, Yorkshire.